

VALVE AND FLOW CONTROL SPECIALISTS

# **V23 Series Plug Valves**

Pressure Rating up to 3,000 psig (206 bar)

#### **Features**

- Quarter-turn operation

Unique forward flow throttling

Matorials of Constructio

Low torque operation

Unidirectional flow

|              | Valve Body Materials            |                         |  |  |
|--------------|---------------------------------|-------------------------|--|--|
| omponent     | Stainless Steel Brass           |                         |  |  |
|              | Grade/ASTM Specification        |                         |  |  |
| 1. Body      | SS316/ A479 or A276             | Brass / B16             |  |  |
| 2. Plug      | PTFE-coated SS316/ A479 or A276 | PTFE-coated Brass / B16 |  |  |
| 3. O-ring    | PTFE-coated FKM                 |                         |  |  |
| 4. Handle    | Nylon                           |                         |  |  |
| 5. Pin       | SS316/A276                      |                         |  |  |
| 6. Snap ring | Stainless Steel                 |                         |  |  |

#### **Technical Data**

| Series | Valve    | Pressure Rating |     | Temperature     | Plug Orifice |  |
|--------|----------|-----------------|-----|-----------------|--------------|--|
| Series | Material | psig            | bar | Rating          | mm (in.)     |  |
| V23A   | SS316    |                 | 206 | -10 to 400 °F   | 4.4 (.17)    |  |
| VZSA   | Brass    | 3,000           |     |                 |              |  |
| V23B   | SS316    |                 |     | (-23 to 204 °C) | 7.2 (.28)    |  |
| V∠3D   | Brass    | 2,000           | 137 |                 | 7.2 (.20)    |  |

- Differential pressure is limited to maximum 150 psig (10.3bar) when reverse flow occurs.
- Throttling reverse flow may damage O-ring.

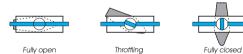
#### Operation

• DK-Lok plug valves provide positive shut-off, high flow capacity, and quick quarter-turn operation.

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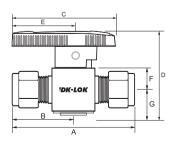
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• DK-Lok plug valve provides flow throttling capability.



#### **Ordering Information and Dimensions**





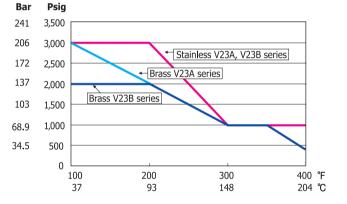
Quality System Approvals HSB RS

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| Basic               | Ordering   | End Connections   |                    | Dimensions mm (inches) |            |                 |            |        |        |        |        |
|---------------------|--|---|--------------------|------------------------|------------|-----------------|------------|--------|--------|--------|--------|
|                     | umber  | Inlet   | Outlet H           | А                      | В          | С               | D          | Е      | F      | G      | н      |
|                     | D-2T-  | 1/8 in. DK-Lok<br>1/4 in. DK-Lok<br>3/8 in. DK-Lok            |                    | 50.5 (1.99)            |            |                 |            |        |        |        |        |
|                     | D-4T-  |   |                    | 55.1 (2.17)            |            |                 |            |        |        |        |        |
|                     | D-6T-  |   |                    | 58.2 (2.29)            |            |                 |            |        |        |        |        |
|                     | D-6M-  | 6mm DK-Lok  |                    | 55.1 (2.17)            |            |                 |            |        |        |        |        |
|                     | M-2N-  | 1/8 in. Male NPT  |                    | 38.9 (1.53)            | 19.8       | 47.8            | 38.6       | 29.0   | 9.4    | 11.7   | 19.1   |
| V23A                | M-4N-  | 1/4 in. Male NPT  |                    | 48.3 (1.90)            |            |                 |            |        |        |        | ()     |
|                     | MD-4N4T-   | 1/4 in. Male NPT  | 1/4 in. DK-Lok     | 51.7 (2.03)            | (0.78)     | (1.88)          | (1.52)     | (1.14) | (0.37) | (0.46) | (0.75) |
|                     | MF-4N-   | 1/4 in. Male NPT  | 1/4 in. female NPT | 50.8 (2.00)            | ]          |                 |            |        |        |        |        |
|                     | F-2N-  | 1/8 in. Female NPT<br>1/4 in. Female NPT                      |                    | 45.2 (1.78)            |            |                 |            |        |        |        |        |
|                     | F-4N-  |   |                    | 53.1 (2.09)            | ]          |                 |            |        |        |        |        |
|                     | F-4R-  | 1/4 in. Female ISO Tapered                                    |                    | 56.1 (2.21)            |            |                 |            |        |        |        |        |
|                     | D-6T-  | 3/8 in. DK-Lok<br>1/2 in. DK-Lok<br>8mm DK-Lok<br>10mm DK-Lok |                    | 67.6 (2.66)            |            | 63.2 54.1       |            |        |        |        |        |
|                     | D-8T-  |   |                    | 73.2 (2.88)            |            |                 |            |        | 14.2   | 16.8   | 28.4   |
|                     | D-8M-  |   |                    | 67.6 (2.66)            |            |                 |            |        |        |        |        |
|                     | D-10M-   |   |                    | 68.1 (2.68)            | 29.0       |                 | 54.1       | 38.1   |        |        |        |
| V23B-               | D-12M-   | 12mm  | DK-Lok             | 75.2 (2.96)            |            |                 |            |        |        |        |        |
|                     | M-8N-  | 1/2 in. N   | 1ale NPT           | 67.1 (2.64)            | (1.14)     | (2.49)          | (2.13)     | (1.50) | (0.56) | (0.66) | (1.12) |
|                     | F-6N-  | 3/8 in. Fe  | male NPT           | 60.5 (2.38)            |            |                 |            |        |        |        |        |
|                     | F-8N-  | 1/2 in. Fe  | male NPT           | 73.2 (2.88)            |            |                 |            |        |        |        |        |
|                     | F-8R-  | 1/2 in. Femal   | e ISO Tapered      | 79.8 (3.14)            |            |                 |            |        |        |        |        |
| All dimens          | All dimensions shown are for reference only and are subject to change. Dimensions with DK-Lok nuts are in finger-tight position. |   |                    |                        |            |                 |            |        |        |        |        |
|                     | DK-Lok Tube  | Fitting Certification Listing                                 |                    |                        | DK-Lok Val | ve Certificatio | on Listing |        |        |        |        |
| Hloyd's<br>Register |  |   |                    |                        | •          |                 |            |        |        |        |        |

### **Pressure - Temperature Curves** with standard FKM O-ring



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# **IDK-LOK**<sup>®</sup> Plug Valves

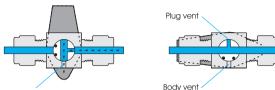
## V23 Series

#### **Factory Test**

• Every V23 series plug valve is factory tested for shutoff at 600psig (41.3 bar).

#### **Optional Downstream Vent**

#### Vent to atmosphere when valve is closed valve open



Optional vented plug and valve body provides system pressure release to atmosphere when valve is closed.

• This option reduces the maximum operation pressure to 150 psig (10.3 bar).

• To order, use designator - VH. See how to order.

#### Flow Data

#### **End Connections** Pressure Drop to Atmosphere, psi (bar) **Basic Ordering** Air Flow, std ft3/min (L/min) Water Flow, US gal/min(L/min) Cv Number Inlet Outlet @ 70 °F (21 °C) 1 (0.068) 10 (0.68) 1 (0.068) 10 (0.68) 5 (0.34) 5 (0.34) D-2T-1/8 in. DK-Lok 0.1 0.3 (8.4) 0.8 (22) 0.1 (0.37) 0.2 (0.75) 0.3 (1.1) 1.1 (31) D-4T-1/4 in. DK-Lok 1.6 6.0 (169) 13 (368) 18 (509) 1.6 (6.0) 3.6 (13.6) 5.1 (19.3) D-6T-3/8 in. DK-Lok 1.1 8.9 (252) 12.4 (351) 1.1 (4.1) 2.5 (9.4) 3.5 (13.2) 4.1 (116) D-6M-6mm DK-Lok 1.6 6.0 (169) 13 (368) 18 (509) 1.6 (6.0) 3.6 (13.6) 5.1 (19.3) M-2N-1/8 in. Male NPT 3.7 (104) 8.1 (229) 11.3 (<mark>320</mark>) 1.0 (<mark>3.7</mark>) 2.2 (<mark>8.3</mark>) 1.0 3.2 (12.1) V23A-M-4N-1/4 in. Male NPT 0.9 0.9(3.4) MD-4N4T-1/4 in. Male NPT 1/4 in. DK-Lok 3.3 (93) 7.3 (206) 10.1 (286) 2.0 (7.5) 2.8 (10.8) 1/4 in. Male NPT 1/4 in. female NPT MF-4N-8.1 (229) 11.3 (320) 1.0 (3.7) 3.2 (12.1) 1.0 3.7 (104) 2.2 (8.3) F-2N-1/8 in. Female NPT 1.2 4.4 (124) 9.7 (274) 13.5 (382) 1.2 (4.5) 2.7 (10.2) 3.8 (14.3) F-4N-1/4 in. Female NPT 0.9 3.3 (<mark>93</mark>) 7.3 (206) 10.1 (286) 0.9 (3.4) 2.0 (7.5) 2.8 (10.8) F-4R-1/4 in. Female ISO Tapered D-6T-3/8 in. DK-Lok 6.4 23.9 (676) 52.0 (1470) 72.3 (2040) 6.4 (24.2) 14.3 (54.1) 20.2 (76.4) D-8T-1/2 in. DK-Lok 4.4 16.4 (464) 35.7 (1010) 49.7 (1400) 4.4 (16.6) 9.8 (37.0) 13.9 (52.6) D-8M-8mm DK-Lok 6.4 23.9 (676) 52.0 (1470) 72.3 (2040) 6.4 (24.2) 14.3 (54.1) 20.2 (76.4) D-10M 10mm DK-Lok 12mm DK-Lok 4.8 17.9 (506) 39.0 (1100) 54.2 (1530) 4.8 (18.1) 10.7 (40.4) 15.2 (57.5) V23B D-12M M-8N-1/2 in. Male NPT 2.4 9.0 (254) 19.5 (552) 27.1 (767) 2.4 (9.0) 5.4 (20.4) 7.6 (28.7) F-6N-3/8 in, Female NPT 4.3 16.0 (453) 34.9 (988) 48.6 (1370) 4.3 (16.2) 9.6 (36.3) 13.6 (51.4) F-8N-1/2 in. Female NPT 2.7 10.1 (286) 21.9 (620) 30.5 (863) 2.7 (10.2) 6.0 (22.7) 8.5 (32.1) F-8R-1/2 in. Female ISO Tapered

#### How to Order

Select the desired valve basic ordering number, options and body material.

| V23A-D-4T- EB   |                            | -В                                   |
|---|----------------------------|--------------------------------------|
| V23B-F-8N   |                            | S V                                  |
| O-ring Material Designator  | Downstream Vent Option     | Body Material Designator             |
| Nil : PTFE-coated Viton<br>EB : PTFE-coated Buna-N<br>EE : PTFE-coated EPDM | Nil : no vent<br>VH : Vent | <b>S</b> : SS316<br><b>B</b> : Brass |

#### We reserve the right to change the specifications stated in this catalog for our continuing program of improvement.

#### **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-Lok accepts no liability for any improper selection, installation, operation or maintenance.

## **DK-LOK**® USA

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# **Optional O-ring material**

PTFE-coated FKM is standard. Choose optional O-ring material for fluid compatibility and system temperatures.

| O-ring material          | O-ring Designator | Temperature Range             |  |  |  |
|--------------------------|-------------------|-------------------------------|--|--|--|
| Standard PTFE-coated FKM | EV                | -20 to 400 °F (-28 to 204 °C) |  |  |  |
| PTFE-coated Buna-N       | EB                | -68 to 221 °F (-20 to 105 °C) |  |  |  |
| PTFE-coated EPDM         | EE                | -49 to 275 °F (-45 to 135 °C) |  |  |  |