

DV Series Diaphragm Valves

Submittal Data Sheet



Job or Customer: _____

Engineer: _____

Contractor: _____

Submitted by: _____ Date _____

Approved by: _____ Date _____

Order No: _____ Date _____

Specification: _____

introduction

IPEX DV Series Diaphragm Valves are rugged industrial products ideal for throttling or use in abrasive slurry lines. The raising position indicator also functions as an adjustable travel stop. This feature can be used to avoid over-compression of the diaphragm, or as a travel limiter allowing different settings for the “closed” position. The molded flanged body eliminates potentially leaky joints while featuring end-to-end dimensions identical to most plastic lined metal diaphragm valves, allowing for direct replacement. DV Series Diaphragm Valves are part of our complete systems of pipe, valves, and fittings, engineered and manufactured to our strict quality, performance, and dimensional standards.

< STANDARDS >



ASTM D1784



ANSI B16.5

Valve Availability

| | |
|------------------|------------------------|
| Body Material: | PVC |
| Size Range: | 1/2" through 6" |
| Pressure: | 150 psi |
| Diaphragm: | EPDM or Teflon® (PTFE) |
| End Connections: | Flanged (ANSI 150) |



IPEX

DV Series Diaphragm Valves

Valve Selection



| Size (inches) | Body Material | O-ring Material | IPEX Part Number FNPT Threaded | Pressure Rating @ 73°F |
|---------------|---------------|-----------------|-----------------------------------|---------------------------|
| 1/2 | PVC | EPDM | 052196 | 150 psi |
| | | Viton® | 052296 | |
| 3/4 | PVC | EPDM | 052197 | |
| | | Viton® | 052297 | |
| 1 | PVC | EPDM | 052198 | |
| | | Viton® | 052298 | |
| 1-1/2 | PVC | EPDM | 052207 | |
| | | Viton® | 052299 | |
| 2 | PVC | EPDM | 052208 | |
| | | Viton® | 052354 | |
| 3 | PVC | EPDM | 052209 | |
| | | Viton® | 052355 | |
| 4 | PVC | EPDM | 052217 | 75 psi |
| | | Viton® | 052356 | |
| 6 | PVC | EPDM | 052218 | |
| | | Viton® | 052357 | |

Size (inches):

- | | |
|--------------------------------|----------------------------|
| <input type="checkbox"/> 1/2 | <input type="checkbox"/> 2 |
| <input type="checkbox"/> 3/4 | <input type="checkbox"/> 3 |
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 1-1/2 | <input type="checkbox"/> 6 |

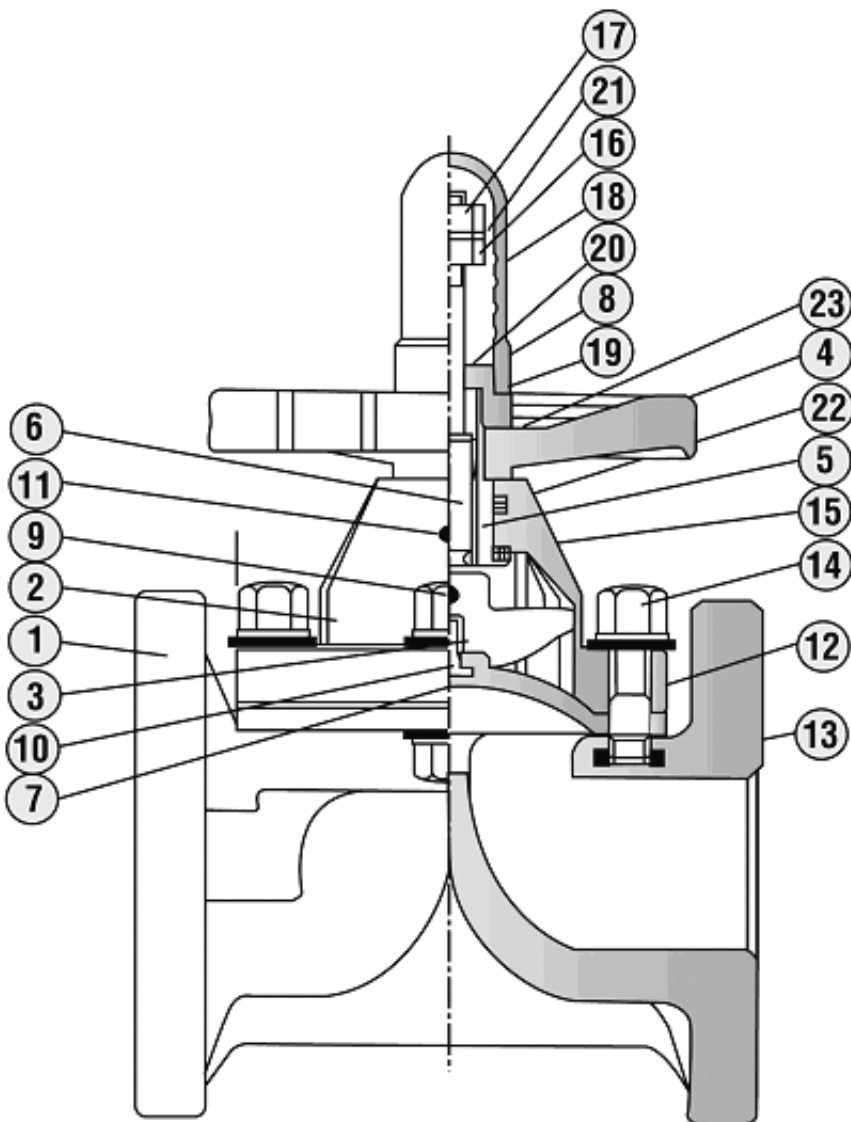
Diaphragm:

- EPDM
- Teflon® (PTFE)

IPEX Part Number:

DV Series Diaphragm Valves

Components



| # | Component | Material | Qty |
|----|----------------|--------------------|-------|
| 1 | body | PVC | 1 |
| 2 | bonnet | PVC | 1 |
| 3 | compressor | FC, SUS | 1 |
| 4 | hand wheel | PP | 1 |
| 5 | sleeve | C3602 | 1 |
| 6 | stem | C3602 | 1 |
| 7 | diaphragm | EPDM or Teflon® | 1 |
| 8 | cap | PVC | 1 |
| 9 | compressor pin | SUS 304 | 1 |
| 10 | inserted metal | C3604, SUS 304 | 1 |
| 11 | grease nipple | C3604 (65-150) | 1 |
| 12 | bolt & washer | 150 | 12 ea |
| 13 | inserted nut | 65-125 | 8 ea |
| 14 | nut & washer | 25-50 | 6 ea |
| 15 | thrust bearing | Standard (100-150) | 1 |
| 16 | stopper nut | SUS 304 | 1 |
| 17 | set nut | SUS 304 | 1 |
| 18 | gauge cover | AS | 1 |
| 19 | sheet gasket | EPDM | 1 |
| 20 | sheet ring | SUS 304 | 1 |
| 21 | spring washer | SUP | 1 |
| 22 | o-ring | NBR | 1 |
| 23 | name plate | PVC | 1 |

DV Series Diaphragm Valves

Installation Procedures



1. Remove the protective seals from either end of the valve then carefully place into the system between the two pipe flanges.
2. Join each end of the valve to the pipe flanges. For correct joining procedure, please refer to the section entitled, “*Joining Methods – Flanging*” in the IPEX Industrial Technical Manual Series, “*Volume I: Vinyl Process Piping Systems*”.

Travel Stop Adjustment

1. Loosen and remove the gauge cover (part #18 on previous page) from the position indicator assembly.
2. Remove and set aside the sheet gasket (19).
3. Loosen the stopper nut (16), spring washer (21), and set nut (17) from the stem (6).
4. Tighten the handwheel (4) slightly until the diaphragm completely seals.
5. Tighten down the stopper nut until it just touches the cap (8), then tighten the set nut and spring washer accordingly.
6. Fit the sheet gasket over the stem and down onto the cap, then replace the gauge cover and tighten.



Note: It is important not to over-tighten the valve during calibration as it may cause permanent damage to the diaphragm. The valve is completely closed when the handwheel cannot turn any further without using excessive torque.

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Testing and Operating



The purpose of system testing is to assess the quality of all joints and fittings to ensure that they will withstand the design working pressure, plus a safety margin, without loss of pressure or fluid. Typically, the system will be tested and assessed in sub-sections as this allows for improved isolation and remediation of potential problems. With this in mind, the testing of a specific installed valve is achieved while carrying out a test of the overall system.

An onsite pressure test procedure is outlined in the IPEX Industrial Technical Manual Series, *"Volume I: Vinyl Process Piping Systems"* under the section entitled, *"Testing"*. The use of this procedure should be sufficient to assess the quality of a valve installation. **In any test or operating condition, it is important to never exceed the pressure rating of the lowest rated appurtenance in the system.**

Important points:

- Never test thermoplastic piping systems with compressed air or other gases including air-over-water boosters.
- When testing, do not exceed the rated maximum operating pressure of the valve.
- Avoid the rapid closure of valves to eliminate the possibility of water hammer which may cause damage to the pipeline or the valve.
- **Use caution not to over-tighten the valve during cycling as it may cause permanent damage to the diaphragm. The valve is completely closed when the handwheel cannot turn any further without using excessive torque.**

Please contact IPEX customer service and technical support with regard to any concern not addressed in this data sheet or the technical manual.

