

HPFDV1 Diaphragm Valves

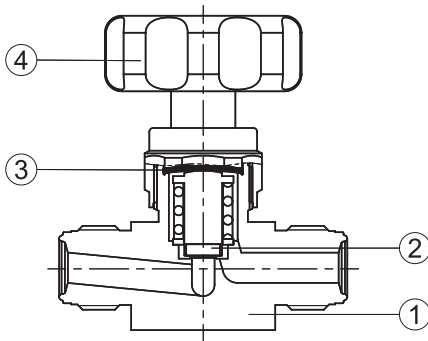
High Pressure Manual Diaphragm Valves (High Flow Type)



Specifications

| | | |
|--|---|--------|
| Size | 1/4" | 1/2" |
| Cv Value | 0.3 | 0.5 |
| Orifice Size | 4.5 mm | 6.0 mm |
| Max. Working Pressure | 210 bar (3,045 psig) | |
| Working Temperature | PCTFE: -10 ~ 40°C (14 ~ 104°F) / PI: -10 ~ 150°C (14 ~ 302°F) | |
| Inboard Leak Test Rates (He) (Holding Time ≥ 15 sec.) | ≤1x10 ⁻⁹ atm.cc/s | |
| Across the Seat Leak Test Rates (He) (Holding Time ≥ 15 sec.) | ≤1x10 ⁻⁹ atm.cc/s | |
| Particle Inspection (EP Only) (0.1µm and Larger) | No Count | |
| Inner Surface Roughness | MP: Ra ≤ 20 µin, Ry ≤ 6 µm BA: Ra ≤ 10 µin, Ry ≤ 3 µm EP: Ra ≤ 5 µin, Ry ≤ 0.7 µm | |

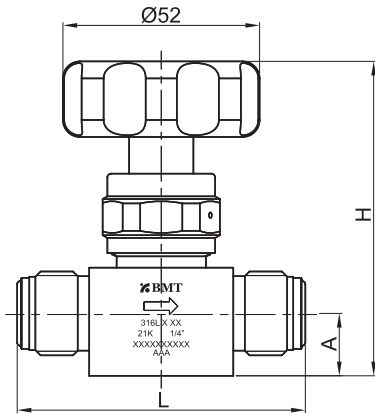
Material



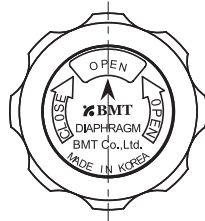
| No. | Component | Material |
|-----|-----------|--------------------------------|
| 1 | Body | 316L Stainless Steel |
| | | 316L Stainless Steel VAR |
| | | 304 Stainless Steel |
| 2 | Seat | PCTFE (<i>standard</i>) / PI |
| 3 | Diaphragm | Ni-Co Alloy |
| 4 | Handle | Aluminium |

NOTE:
 ·Dimensions and Drawings are for reference only and are subject to change without prior notice.
 ·Unless otherwise specified, all dimensions are in millimeters.

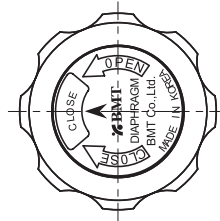
Dimensions



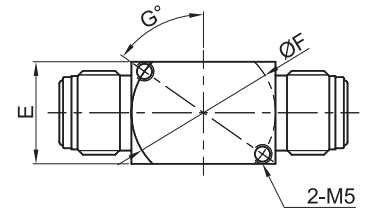
Male BVC



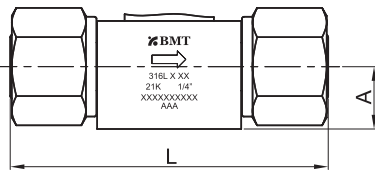
Handle Open



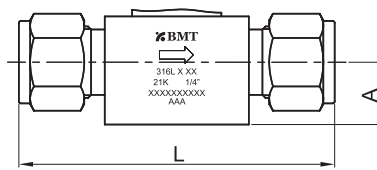
Handle Close



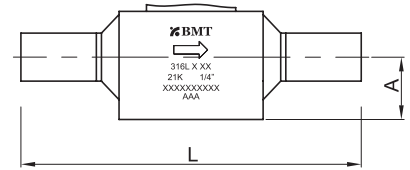
Bottom Mounting



Female BVC



SUPERLOK Tube Fitting



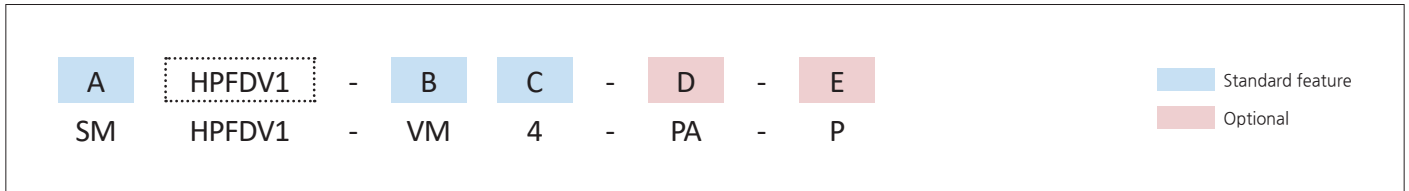
Tube Butt Weld

| End Connection | Part No. | Dimensions (mm) | | | | | |
|-----------------------|--------------|-----------------|------|------|----|-------|----|
| | | L | H | A | E | F (Φ) | G |
| Male BVC | SMHPFDV1-VM4 | 57 | 71.4 | 11 | 28 | 25.4 | 45 |
| | SMHPFDV1-VM8 | 76 | 83.2 | 16.5 | 27 | 38 | 55 |
| Female BVC | SMHPFDV1-VF4 | 70.6 | 71.4 | 11 | 28 | 25.4 | 45 |
| | SMHPFDV1-VF8 | 90 | 83.2 | 16.5 | 27 | 38 | 55 |
| SUPERLOK Tube Fitting | SMHPFDV1-S4 | 63.7 | 71.4 | 11 | 28 | 25.4 | 45 |
| | SMHPFDV1-S8 | 90 | 83.2 | 16.5 | 27 | 38 | 55 |
| Tube Butt Weld | SMHPFDV1-TW4 | 44.2 | 71.4 | 11 | 28 | 25.4 | 45 |
| | SMHPFDV1-TW8 | 90 | 83.2 | 16.5 | 27 | 38 | 55 |

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Ordering Information

High Pressure Manual Diaphragm Valves (High Flow Type)
 *Additional configurations available upon request.



| A | Materials | |
|-----|--------------------------|--|
| SM | 316L Stainless Steel | |
| DM | 316L Stainless Steel VAR | |
| 4SS | 304 Stainless Steel | |

| D | Seat Material | |
|---|---------------|--|
| PCTFE is standard. No part designator needed. | | |
| PA | PFA | |
| PI | Polyimide | |

| B | Connection Type | |
|-------|----------------------------------|--|
| VM | Male BVC (BMT Vacuum Coupling) | |
| VF | Female BVC (BMT Vacuum Coupling) | |
| S | SUPERLOK Tube Fitting | |
| TW | Butt Weld | |
| VMXVF | In Male-Out Female | |

| E | Wetted Surface Grade | |
|--|----------------------|--|
| BA is standard. No part designator needed. | | |
| P | EP | |
| AP | AP | |

| C | Connection Size | | | |
|---|-----------------|--------------|------------------|----------------|
| | Designator | Nominal Size | Outside Diameter | Wall Thickness |
| | 4 | 1/4 in. | 6.35 mm | 1.00 mm |
| | 8 | 1/2 in. | 12.7 mm | 1.24 mm |

Part Number Examples

| | DMHPFDV1-VF8 | | SMHPFDV1-VM4-PA-P | |
|------------------|--------------|-------------------------------|-------------------|-------------------------------|
| Material | DM | 316L Stainless Steel VAR | SM | 316L Stainless Steel |
| Series | HPFDV1 | HPFDV1 series | HPFDV1 | HPFDV1 series |
| Operation Method | | <i>Omit for Manual Valves</i> | | <i>Omit for Manual Valves</i> |
| Connection Type | VF | BVC Female | VM | BVC Male |
| Connection Size | 8 | 1/2" | 4 | 1/4" |
| Seat Material | | PCTFE (standard) | PA | PFA |
| Grade | | BA grade (standard) | P | EP grade |

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