

Mega-M LV

All-Metal Micrometer Metering Valves



End-Connections

Available in UJR (VCR® compatible), UPG, and IGS surface-mount. This allows for flexible installation in new gas lines as well as in existing lines without costly modifications.

Ultra-Smooth Internal Finish

All internal surfaces undergo a UP Treatment as standard, resulting in a surface finish of 2 Ra average, 5 Ra maximum.

Minimal Internal Volume

1.38 cc total internal volume for the male UJR version ensures excellent gas displacement characteristics. This is 2¼ times less than the internal volume of competitive valves!

Micrometer Precision

By combining a short-stroke valve with the extremely-precise positioning capabilities of a micrometer, we are able to offer a valve with an unprecedented level of metering accuracy.

Alloy Diaphragm

Nickel-cobalt alloy diaphragm minimizes particle generation, and provides a durable shut-off surface against the seat.

Metal Seat

All wetted surfaces are metallic by utilizing a metal seat, thereby enhancing tool performance, providing superior shut-off, and minimizing particle generation.

Stringent Leakage Standards

Seat and external leakage successfully test at 5×10^{-11} acc/sec – which is two orders of magnitude tighter than industry standards.

General Specifications

| | |
|--------------------------|----------------------------|
| Available Sizes | 1/4" |
| Surface Finish | 2 Ra average, 5 Ra maximum |
| Tested Durability | Over 1,000 cycles |

Operating Specifications

| | |
|-------------------------------|----------------------------------|
| Max Operating Pressure | 145 psi (1 MPa) |
| Min Operating Pressure | Vacuum |
| Temperature Range | 14 °F ~ 302 °F (-10 °C ~ 150 °C) |

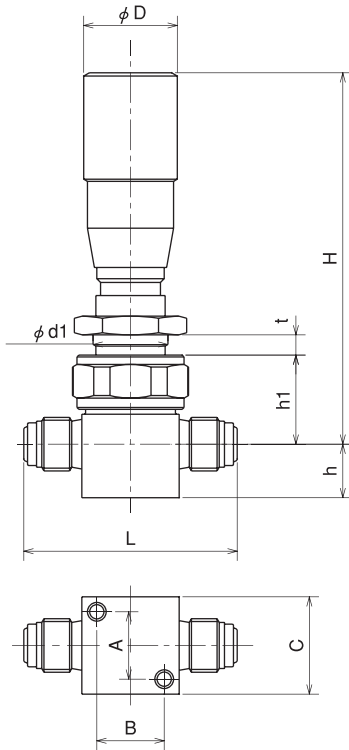
Materials of Construction

| | |
|----------------------|---------------------|
| Body | SS 316L |
| Diaphragm | Nickel-cobalt alloy |
| Standard Seat | Metal |
| Handle | Aluminum Alloy |

Functional Performance

| | |
|-------------------------------------|--|
| Maximum Cv | 0.20 (4.5 mm orifice) 0.03 (1.0 mm orifice) |
| Leakage Across Seat (Design) | 1×10^{-10} scc/sec He |
| Leakage Across Seat (Tested) | $< 5 \times 10^{-11}$ scc/sec He |
| Inboard Leakage (Design) | 2×10^{-10} scc/sec He |
| Inboard Leakage (Tested) | $< 5 \times 10^{-11}$ scc/sec He |

Dimensions



| Part Number | ØD | L | H | h | t | h1 | Ød1 | A | B | C |
|---------------------|----|------|-----|------|-----|------|------|----|----|----|
| FUDDFM-71M-6.35 | 25 | 57.0 | 105 | 14.3 | 5.5 | 23.8 | 16.5 | 18 | 18 | 26 |
| FUDDFM-71M-6.35-2 | 25 | 70.6 | 105 | 14.3 | 505 | 23.8 | 16.5 | 18 | 18 | 26 |
| FUDDFM-71M-6.35UG | 25 | 46.0 | 105 | 14.3 | 505 | 23.8 | 16.5 | 18 | 18 | 26 |
| FUDDFM-71M-6.35UG-2 | 25 | 71.0 | 105 | 14.3 | 5.5 | 23.8 | 16.5 | 18 | 18 | 26 |

All dimensions in millimeters.

Part Number Designation

FUDDFM - 5 1 M - 6.35 BW - S - FD

Series

FUDDF Stainless Steel Direct Diaphragm Valve

Seat Material

M Metal Seat

End-Connections

2 IGS Surface-Mount
7 UJR / UPG

Max Operating Pressure

1 1 MPa (145 psi)

Operation

M Micrometer Handle

Internal Treatment

PS Cr₂O₃ Treatment
FD Fluorine Passivation

Maximum Cv

(Blank) Cv - 0.20
S Cv - 0.03

End-Connection Pattern

(Blank) Male UJR Both Ends
-2 Female UJR Both Ends
UG UPG Both Ends
BW Butt Weld Both Ends

End-Connection Size

6.35 1/4"

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