

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)

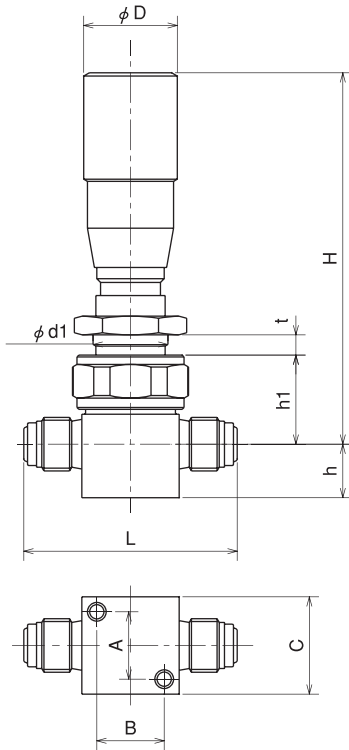
Materials of Construction

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

FUDDFM 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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