

NEW

FINE series PURE High Flow Valve series

KIWAMI

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The Height of
Excellence



FUDF-72G-12.7-CRB

FPR-NDF-72-12.7-CRB

Safety & Clean Technology

Fujikin Incorporated

High Flow Valve Series Lineup

Pressure (MPa)

20.5

16.2

2

1

FPR-NDF-721-12.7-CRB#A

FPR-UDF-721-12.7



P6



P7

FUDDFB-721G-6.35

FUDF-721G-12.7-CRB

FUDF-721G-12.7



P4



P6



P7

FPR-NDF-72-12.7-CRB

FUDF-72G-12.7-CRB



P5



P5

FPR-ND-71-9.52

FUND-71G-9.52



0.25

0.5

0.65

0.8



Direct Diaphragm Valves



Diaphragm Valves



Bellows Valves



High-Flow IGS

Piping Valve Series

● **HB Series**
Bellows Valves for Ultra-pure Gas Lines



● **HF Series**
High Flow Bellows Valves for Ultra-pure Gas Lines



● **SPDS Series**
Diaphragm Valves for Ultra-pure Gas Lines



● **HBF Series**
Forged Bellows Valves for Ultra-pure Gas Lines



P3
FPR-BD-71-12.7

1



P3
FUBD-71G-12.7

1.5



FPR-72-19.05



FUB-72-19.05



FPR-71-19.05



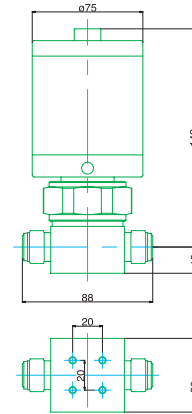
FUB-71-19.05

2.8 Maximum Cv (20°C)

Low-pressure Pneumatic Direct Diaphragm Valves

FPR-BD-71-12.7

1.0MPa
Maximum Cv: 1.5



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	Actuation Pressure	Supply Air Connection	End Connection
	12.7	1.0 MPa (145 psi)	-10 to 40°C	1.5	0.44 to 0.68 MPa (64 to 98 psi)	Rc1/8	UJR, UPG

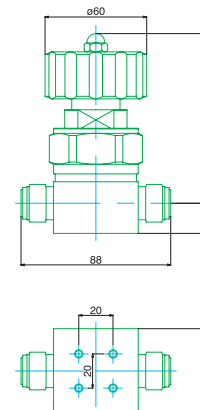
● Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
 ● Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
 * Depends on the configuration of the body.

● All valves are helium leak tested.
 ● Durability of over 200,000 cycles under test conditions.

Low-pressure Manual Direct Diaphragm Valve

FUBD-71G-12.7

1.0MPa
Maximum Cv: 1.5



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	End Connection
	12.7	1.0 MPa (145 psi)	-10 to 40°C	1.5	UJR, UPG

● Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
 ● Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
 * Depends on the configuration of the body.

● All valves are helium leak tested.
 ● Durability of over 20,000 cycles under test conditions.

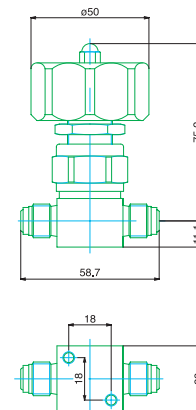


High-pressure Manual Direct Diaphragm Valve

FUDDFB-721G-6.35

20.5MPa
Maximum Cv: 0.25

Valves with high-pressure gas certification available.



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	End Connection
	6.35	20.5 MPa (2973 psi)	-10 to 40°C	0.25	UJR, UPG

● Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
 ● Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
 * Depends on the configuration of the body.

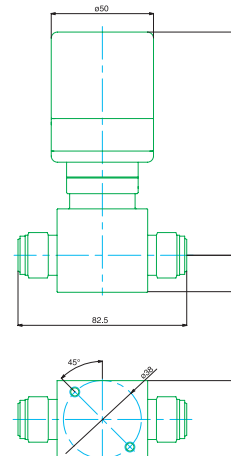
● All valves are helium leak tested.
 ● Durability of over 20,000 cycles under test conditions.

Low-/Medium-pressure Pneumatic Diaphragm Valves

FPR-NDF-72-12.7-CRB

20MPa
Maximum Cv: 1.5

Valves with high-pressure gas certification available.



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	Actuation Pressure	Supply Air Connection	End Connection
	12.7	2.0 MPa (290 psi)	-10 to 40°C	1.5	0.5 to 0.7 MPa (73 to 101 psi)	M5×0.8	UJR, UPG

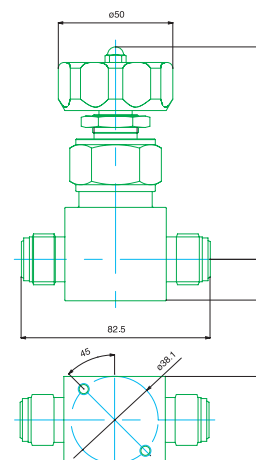
- Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
 - Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
 - All valves are helium leak tested.
 - Durability of over 100,000 cycles under test conditions.
- * Depends on the configuration of the body.

Low-/Medium-pressure Manual Diaphragm Valves

FUDF-72G-12.7-CRB

20MPa
Maximum Cv: 1.5

Valves with high-pressure gas certification available.



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	End Connection
	12.7	2.0 MPa (290 psi)	-10 to 40°C	1.5	UJR, UPG

- Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
 - Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
 - All valves are helium leak tested.
 - Durability of over 20,000 cycles under test conditions.
- * Depends on the configuration of the body.

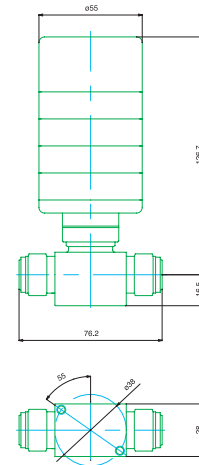


High-pressure Pneumatic Diaphragm Valves

FPR-NDF-721-12.7-CRB#A

20.5 MPa
Maximum Cv: 0.5

Valves with high-pressure gas certification available.



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	Actuation Pressure	Supply Air Connection	End Connection
	12.7	20.5 MPa (2973 psi)	-10 to 40°C	0.5	0.5 to 0.7 MPa (73 to 101 psi)	M5x0.8	UJR, UPG

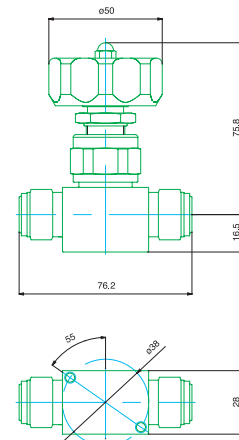
- Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
- Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
- * Depends on the configuration of the body.
- All valves are helium leak tested.
- Durability of over 15,000 cycles under test conditions.

High-pressure Manual Diaphragm Valves

FUDF-721G-12.7-CRB

20.5 MPa
Maximum Cv: 0.5

Valves with high-pressure gas certification available.



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	End Connection
	12.7	20.5 MPa (2973 psi)	-10 to 40°C	0.5	UJR, UPG

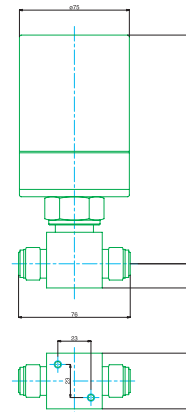
- Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
- Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
- * Depends on the configuration of the body.
- All valves are helium leak tested.
- Durability of over 10,000 cycles under test conditions.

High-pressure Pneumatic Diaphragm Valves

FPR-UDF-721-12.7

20.5MPa
Maximum Cv: 1.0

Valves with high-pressure gas certification available.



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	Actuation Pressure	Supply Air Connection	End Connection
	12.7	20.5 MPa (2973 psi)	-10 to 40°C	1.0	0.55 to 0.75 MPa (80 to 108 psi)	Rc1/8	UJR, UPG

● Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
 ● Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
 * Depends on the configuration of the body.

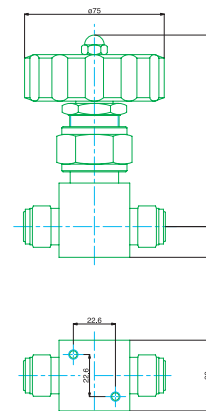
● All valves are helium leak tested.
 ● Durability of over 20,000 cycles under test conditions.

High-pressure Manual Diaphragm Valves

FUDF-721G-12.7

20.5MPa
Maximum Cv: 1.0

Valves with high-pressure gas certification available.



Specifications	Nominal Diameter	Maximum Operating Pressure	Fluid Temperature Range	Maximum Cv* (with N ₂ gas at 20°C)	End Connection
	12.7	20.5 MPa (2973 psi)	-10 to 40°C	1.0	UJR, UPG

● Theoretical leak rate: External leak: $< 5 \times 10^{-12}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-12}$ Pa·m³/sec
 ● Tested leak rate: External leak: $< 5 \times 10^{-10}$ Pa·m³/sec. Seat leak: $< 5 \times 10^{-10}$ Pa·m³/sec
 * Depends on the configuration of the body.

● All valves are helium leak tested.
 ● Durability of over 3,000 cycles under test conditions.

Valves with High-pressure Gas Certification Specifications

Allocation No.				Attached Documents							
Serial No.											
Customer				Code No.							
End User *1				Code No.							
Target System Name *2				Type of Test Performed *3		High-pressure Certification Test High-pressure Recertification Test					
Equipment Category *3 *4 N: Valves, N-II: Fittings, O: Other F: Reciprocating compressor, Z: Combined equipment, M: Tubing, E: Other pressure vessel				Delivery Date							
Product Number				Quantity							
Additions to Product Number		Drawing No.		End Connection Size							
Specifications	Normal Pressure (Maximum Operating Pressure)	MPa		Design Pressure	MPa		Will this be used in vacuum conditions *3	No Yes (Pa)			
	Design Temperature	MIN.	MAX.	Normal			State of High-pressure Gas *3	Gaseous, Liquefied, Dissolved			
	Type of Gas *3	Toxic, Flammable, Toxic and Flammable, Special High-pressure, Other									
	Name of Gas *3	Non-toxic	Air, Nitrogen, Helium, Oxygen, Hydrogen, Carbon dioxide, Argon Other ()								
		Special	Monosilane, Phosphine, Arsine, Diborane, Hydrogen selenide, Monogermane, Disilane ()								
		Toxic/flammable	Ammonia, Carbon monoxide, Other ()								
Material *3	SUS316 or SUSF316		SUS304 or SUSF304		SUS316L or SUSF316L		SCS14 Other ()	C3604B C3771B			
	Other Special Specifications:		Target system has leak detector? *3		Yes / No		Valve used for toxic gas (special high-pressure gas) has a leak port? *3	Yes / No			
Order No.				Comments from Factory Personnel:							
Project No.											
Spec. No.											
Documents Submitted			*3 Destination (Products & Documents)								
(1)Test Report (Authorized Tester)	1 copy	Sales Office Send directly to:									
(2)Test Certificate (N-II excluded)	Copies										
(3)Instruction Manual (N-II only)	Copies										
(4)Other											
·Delivery Specifications	Copies										
·Mill Certificate	Copies										
·Calculations of Wall Thickness Strength											
·Fujikin Design Specification (standard)	Copies										
·Design Specifications	Copies										
·Inspection Procedures	Copies										
Seal of Approval		Sales Representative		C T D		T D C		M F D			