

Micro Needle Valve FMNV1 & FMNV2 Series

The non-rotate-feature helps the precise flow control.

FMNV1 Series:

Because of the number of revolutions, the flow rate is easily adjusted and has liner characteristic. It is suitable for various kinds of fluid, infinitesimal flow setting and severe adjustment use.

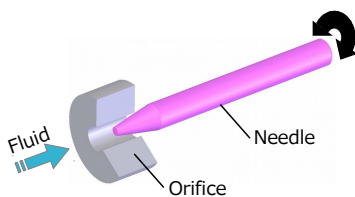
FMNV2 Series:

With the rotary-dial, the severe flow control could be easily done.



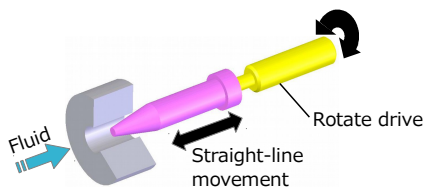
Design Concept

<General Concept>



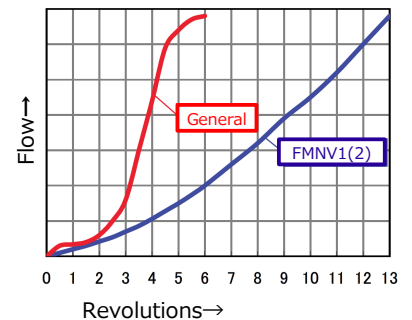
- Because of the direct control by the rotating needle, the flow volume is unstable and each individuals could be slightly different.

<FMNV1(2)>



- By separating the rotate drive, the orifice control is smooth and precise.

Flow Comparison Chart



Applications

Medical Equipment

Infinitesimal flow control for various medical equipment, respiratory equipment and anesthesia equipment



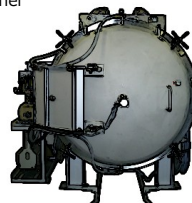
Analyzer and Measurements

Precise flow control for gas ingredient analyzer, gas detector, and environment survey equipment



Combustion/Industrial Furnace

Precise flow control for general industrial furnace, heating furnace, firing equipment and burner



Dispenser

Precise liquid flow control for 2 liquid/gas mixing equipment and mist generator



Micro Needle Valve FMNV1 Series

precision

RoHS

gas liquid

IBS Inc.



standard

Bite Type Fitting

Feature

- No-rotate-feature helps smooth and precise fluid control (The number of revolutions: about 13 turns)
- Variety of the needle selections
- 2 Body shape selections depending on the piping conditions
- Special seal materials available

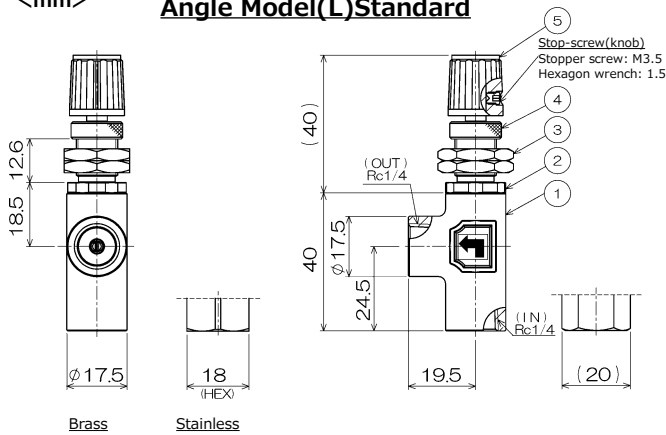
Specification

Fluid	Gas & Liquid (Non acid)	Body Material	Brass	Brass (Nickel Plate)
			Stainless	SUS316
Max. Use Pressure	1.0MPa	Wetted Material	Brass	Brass, SUS316, PTFE, FKM (Standard)
			Stainless	SUS316, PTFE, FKM (standard)
Proof Pressure	1.5MPa	Fluid Temperature	Brass	0~60°C (FKM)
			Stainless	0~120°C (FKM)
Connection size	Rc1/4 (Standard)	Knob Revolution	About 13 turns	
Note	■ Bite Type Fitting is only available for stainless series. Please contact us for a detailed measurement.			

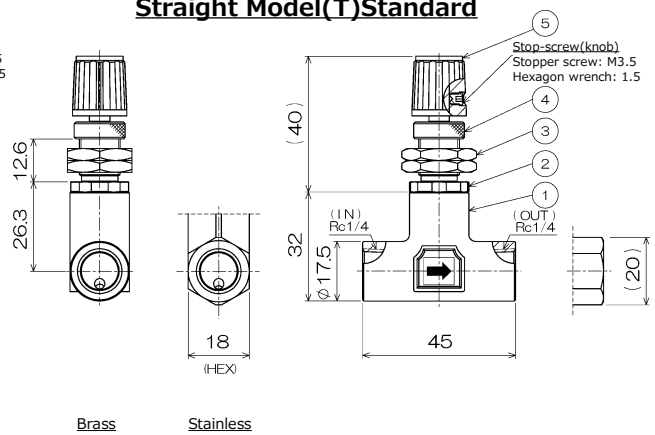
Measurement/Material

<mm>

Angle Model(L)Standard



Straight Model(T)Standard

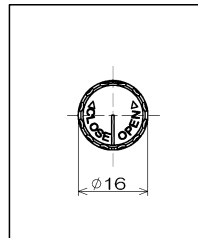


※Body Shape: Brass→Cylinder, Stainless→Hexagon (HEX18)
Both connection sizes are the same.

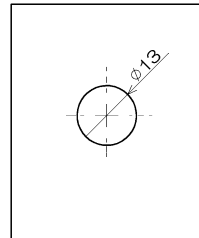
Material List

#	Parts Name	Material	
		Brass Spec	Stainless Spec
①	Valve Body	C3771 (Nickel Plate)	SUS316
②	Needle Body	C3604 (Nickel Plate)	SUS316
③	Panel Nut	C3604 (Nickel Plate)	
④	Cover Nut	C3604 (Nickel Plate)	
⑤	Knob	Nylon (Standard)	

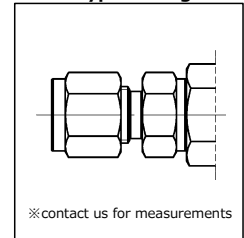
Knob



Panel Cut



Bite Type Fitting



※contact us for measurements

Part Number Selection Table

FMNV1 - L B - 2 - V - N** - * - *

Item Code

FMNV1	Precision needle
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Valve Shape

L	Angle Model
T	Straight Model

Body Material

B	Brass
T	Stainless

Connection Size

2	Rc1/4 (Standard)
T1	Φ1/8 Tube Fitting
T2	Φ1/4 Tube Fitting
TM4	Φ4mm Tube Fitting
TM6	Φ6mm Tube Fitting

Seal Material

code	Name	code	Name
V	FKM (Std.)	N	NBR
E	EPDM	D	Perfluor
K	Kalrez		

Needle Number

Needle #	Maximum Coefficient of flow	Needle #	Maximum Coefficient of flow
N1	0.00021	N6	0.031
N2	0.0012	N7	0.04
N3	0.004	N8	0.12
N4	0.006	N9	0.15
N5	0.016	N10	0.25

Degrease

-	No need
NO	Need to degrease

Knob Material

-	Nylon (Standard)
A	Aluminum Alloy

※Bite Type Fitting: Stainless only

※Contact us for other materials.

※The above result could be changed depends on the use condition. They are only for the reference.

※The Catalogue can be revised without notice.

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Panel mount application

Piping application

Feature

- Rotary-dial attached to indicate the revolutions
- One-touch lock is possible with the lock lever
- Correspond to the panel-mount use

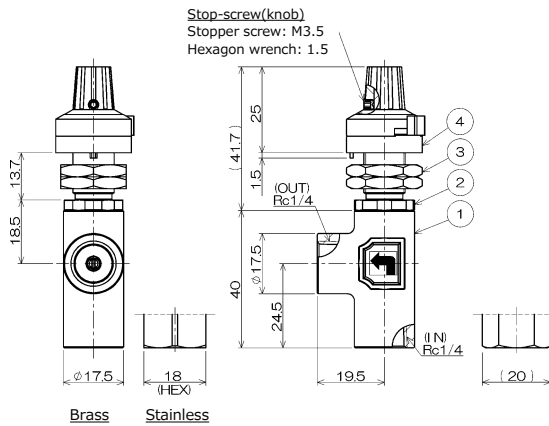
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Fluid	Gas & Liquid (Non acid)	Body Material	Brass	Brass (Nickel Plate)
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Max. Use Pressure	1.0MPa	Wetted Material	Brass	Brass, SUS316, PTFE, FKM (Standard)
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Proof Pressure	1.5MPa	Fluid Temperature	Brass	0~60°C (FKM)
			Stainless	0~120°C (FKM)
Connection Size	Rc1/4 (Standard)	Knob Revolution	About 13 turns (dial indication 20 turns)	
Note	<ul style="list-style-type: none"> ■ Bite Type Fitting is only available for stainless series. Please contact us for a detailed measurement. ■ Standard...Panel mount application Option...Piping application "code F" at the end of PN 			

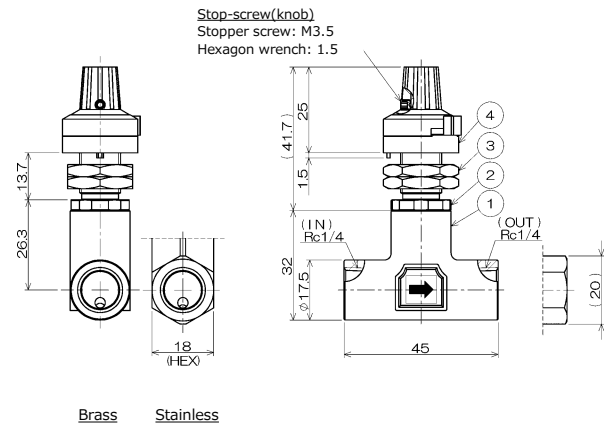
Measurement/Material

<mm>

Angle Model(L)Standard



Straight Model(T)Standard

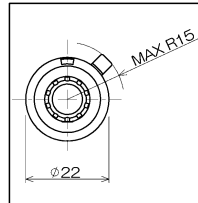


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Both connection sizes are the same.

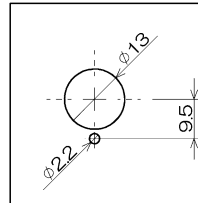
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③	Panel Nut	C3604 (Nickel Plate)	
④	Multi-dial	Nylon, Aluminum, others	

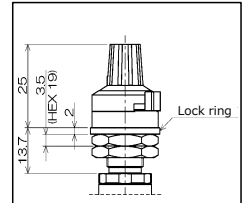
Dial



Panel Cut



Measurement for piping application



Part Number Selection Table

FMNV2 - L B - 2 - V - N** - * - *

Item Code

FMNV2	Precision needle with dial
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Valve Shape

L	Angle Model
T	Straight Model

Body Material

B	Brass
T	Stainless

Connection

2	Rc1/4 (Standard)
T1	Φ1/8 Tube Fitting
T2	Φ1/4 Tube Fitting
TM4	Φ4mm Tube Fitting
TM6	Φ6mm Tube Fitting

Seal Material

code	Name	code	Name
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Needle Number

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N3	0.004	N8	0.12
N4	0.006	N9	0.15
N5	0.016	N10	0.25

Degrease

-	No need
NO	Need to degrease

-	Panel mount application
F	Piping application

※Lock ring will be added for piping application.

※ Bite Type Fitting: Stainless only

※Contact us for other materials.

※The above result could be changed depends on the use condition. They are only for the reference.

※The Catalogue can be revised without notice.

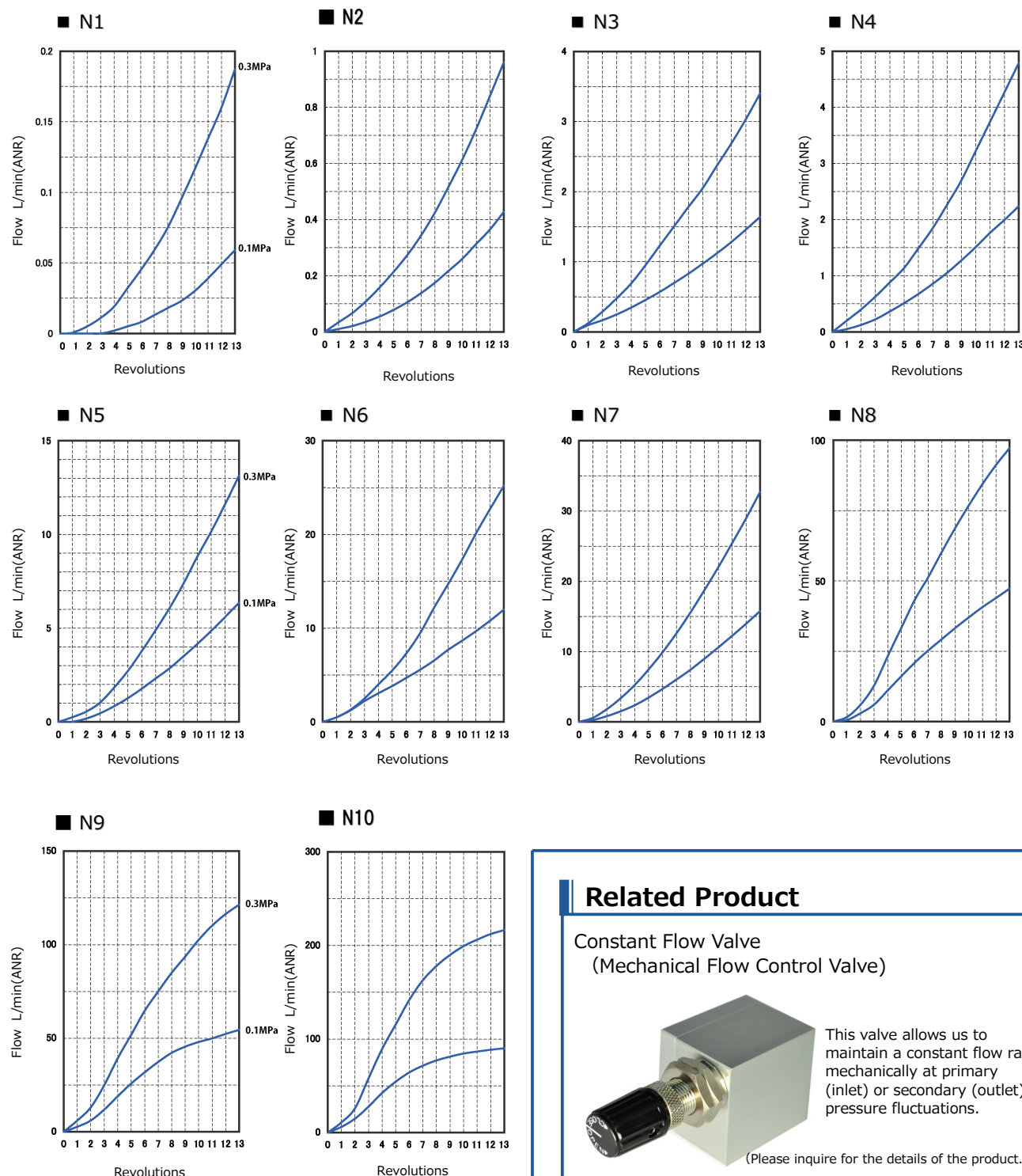
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Flow Peculiarity for FMNV1/FMNV2

Body: Angle Model(L)
 Connection Size: Rc1/4
 Fluid: AIR



<Note>

- The tested conditions: Atmospheric open outlet with pressure 0.1MPa and 0.3MPa. The results are for the purpose of selecting code only.
- Angle Model (T) has smoother flow than Straight Model(L). If the flow is over 5L/min, please select Angle Model (T).

*The Catalogue can be revised without notice.

Related Product

Constant Flow Valve
 (Mechanical Flow Control Valve)



This valve allows us to maintain a constant flow rate mechanically at primary (inlet) or secondary (outlet) pressure fluctuations.

(Please inquire for the details of the product.)

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