



Air operated valve for chemical liquids

# AMDZ<sup>1</sup>/<sub>2</sub><sub>3</sub>/AMD0<sup>1</sup>/<sub>2</sub><sub>3</sub> Series

● Connection tube size: ø3, ø6, ø6.35, 1/8", 1/4", (Rc1/8)



## Specifications

Item	AMDZ *-* 2	AMDZ**4	AMD0**4
Working fluid	Chemical liquid, pure water, N <sub>2</sub> gas, air (*3)		
Fluid temperature °C	5 to 80		
Proof pressure MPa	1.0		
Working pressure (A→B) MPa	0 to 0.5	0 to 0.3	0 to 0.5
Working pressure (B→A) MPa	0 to 0.3		
Valve seat leakage cm <sup>3</sup> /min	0 (water pressure)		
Back pressure MPa	0 to 0.3	0 to 0.1	0 to 0.3
Ambient temperature °C	0 to 60		
Frequency	30 cycles/min. or less		
Mounting orientation	Unrestricted		
Connection	Rc1/8 O.D. ø3 tube connection O.D. 1/8" tube connection	O.D. ø6 tube connection O.D. 1/4" tube connection	Rc1/8 O.D. ø6 tube connection O.D. 1/4" tube connection
Orifice size	ø2	ø3.5	ø4
Cv value	0.08 (*1, 2)	0.25	0.32 (*2)
Operating section	Operating pressure MPa	NC/NO: 0.3 to 0.5, double acting: 0.2 to 0.3	NC/NO: 0.35 to 0.5, double acting: 0.2 to 0.3
	Operating port	M5	
Weight kg	0.06	0.06	0.11

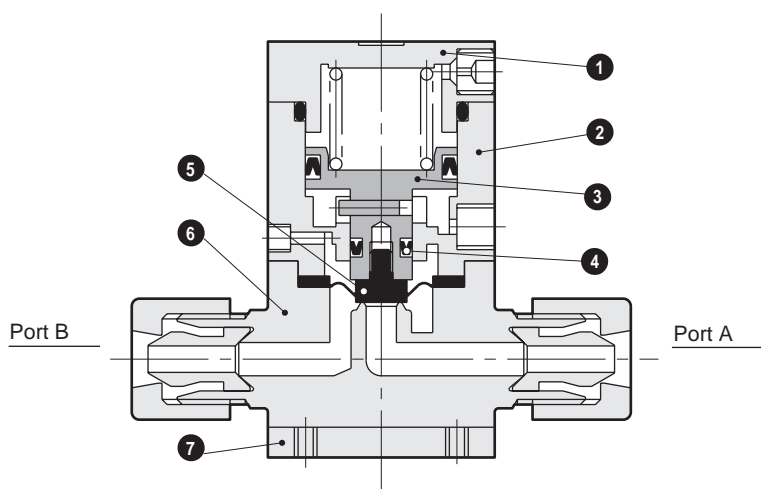
\*1: The PFA body with Rc1/8 connection will have Cv = 0.12.

\*2: The SUS body Cv will be about 80% of that of the PFA body with Rc1/8 connection.

\*3: Cannot be used with acidic fluids. For use with acidic fluids, refer to pages 2 and 20. Check the compatibility of product structural materials, working fluids and atmosphere.

\*4: Refer to page 70 for flow characteristics.

## Internal structure and parts list



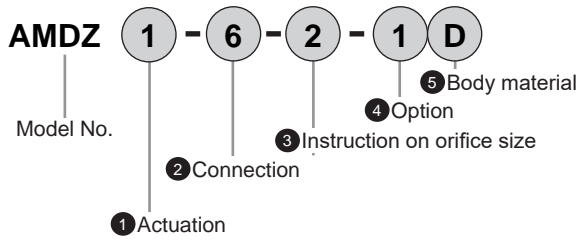
Part No.	Part name	Material (by body material)	
		Standard	D
1	Cover	PPS	
2	Cylinder	PPS	
3	Piston rod	SUS303	
4	Y packing	NBR	
5	Diaphragm	PTFE	
6	Body	PFA, PTFE	SUS316
7	Mounting plate	SUS304	—

The material and structure may vary depending on the model number. Contact CKD for details.

⚠ Always read the precautions on Intro Pages 7 to 14 before use.

### How to order

#### ●AMDZ Series



2

1

5 Body material

4 Option

3 Instruction on orifice size

ection

2 Connection

6	3US	6BUS	3UP	6BUP	3UF	3UR	6BUR	6UR	8BUR	
Rc 1/8	Super Type Pillar fitting Integrated		Super 300 Pillar fitting P series integrated		F-LOCK 20 Series Integrated fitting	F-LOCK 60 Series Integrated fitting				
	ø3 x ø2 tube connection	1.8" x 0.086" tube connection	ø3 x ø2 tube connection	1.8" x 0.086" tube connection	ø3 x ø2 tube connection	ø3 x ø2 tube connection	1/8" x 1/16" tube connection	ø6 x ø4 tube connection	1/4" x 5/32" tube connection	

Code	Description
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1 Actuation

1	NC (normally closed)	●	●	●	●	●	●	●	●	●
2	NO (normally open)	●	●	●	●	●	●	●	●	●
3	Double acting	●	●	●	●	●	●	●	●	●

3 Orifice size

2	Refer to text at right	ø2						ø1.6			
4	Refer to text at right									ø3.5	

4 Option

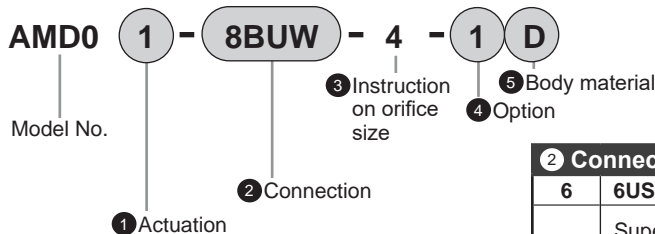
Blank	ON/OFF only	●	●	●	●	●	●	●	●	●
1	With flow rate adjustment (NC only)	●	●	●	●	●	●	●	●	●

5 Body material

Blank	PFA molded body or PTFE machined body	PFA	PFA	PFA	PTFE	PTFE	PTFE	PFA
D	Stainless steel body	●						

\* Machined PTFE products will be manufactured on a per-order basis.

#### ●AMD0 Series



Size

2 Connection

uation

		2 Connection											
		6	6US	8BUS	6UP	8BUP	6UF	8BUF	6UR	8BUR	6UK	8BUK	8BUW
Rc 1/8		Super Type Pillar fitting Integrated		Super 300 Pillar fitting P series integrated		F-LOCK 200 Series Integrated fitting		F-LOCK 60 Series Integrated fitting		Final Lock Fitting Integrated		Flaretek Fitting Integrated	
		ø6 x ø4 tube connection	1/4" x 5/32" tube connection	ø6 x ø4 tube connection	1/4" x 5/32" tube connection	ø6 x ø4 tube connection	ø6.35 x ø4.3 tube connection	ø6 x ø4 tube connection	1/4" x 5/32" tube connection	ø6 x ø4 tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	
Code	Description												
1 Actuation													
1	NC (normally closed)	●	●	●	●	●	●	●	●	●	●	●	●
2	NO (normally open)	●	●	●	●	●	●	●	●	●	●	●	●
3	Double acting	●	●	●	●	●	●	●	●	●	●	●	●
3 Orifice size													
4	Refer to text at right	ø4						ø3.5		ø4		ø3	
4 Option													
Blank	ON/OFF only	●	●	●	●	●	●	●	●	●	●	●	●
1	With flow rate adjustment	●	●	●	●	●	●	●	●	●	●	●	●
5 Body material													
Blank	PFA molded body or PTFE machined body	PFA	PFA		PFA		PFA		PFA		PFA		PTFE
D	Stainless steel body	●											

\* Machined PTFE products will be manufactured on a per-order basis.

### ⚠ Precautions for model No. selection

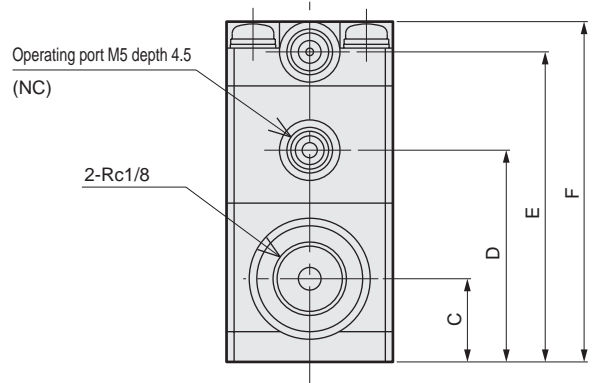
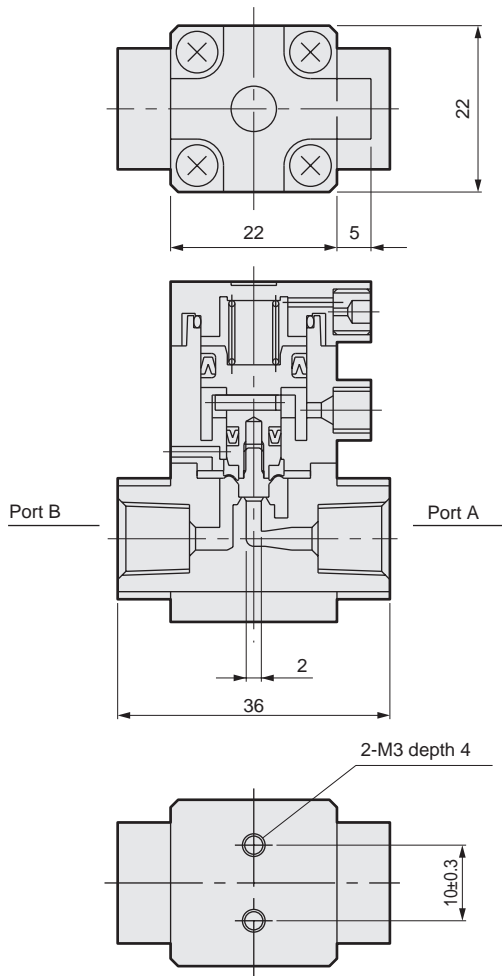
\*1: Refer to pages 2 and 20 if selecting all-resin for an actuator that can be used for acidic fluids.

\*2: The low-sliding (diaphragm) actuator is also supported to reduce foaming and improve liquid drainage performance. Contact CKD for details.

Part3R	Part2	Part1	High pressure	Large bore size	Polyvinyl chloride	Drainage	Part3RN	Part2	High pressure	Large bore size	Single unit	Air operated integrated	Pilot	Manual	Electric	Manual	Manual Fine flow rate	Fine level Switch	Related products
			Air operated valve						Manual valve		Drip prevention valve	Regulator							

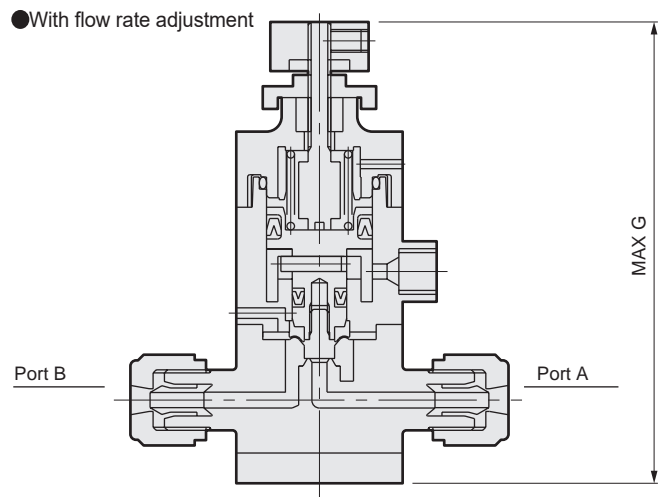
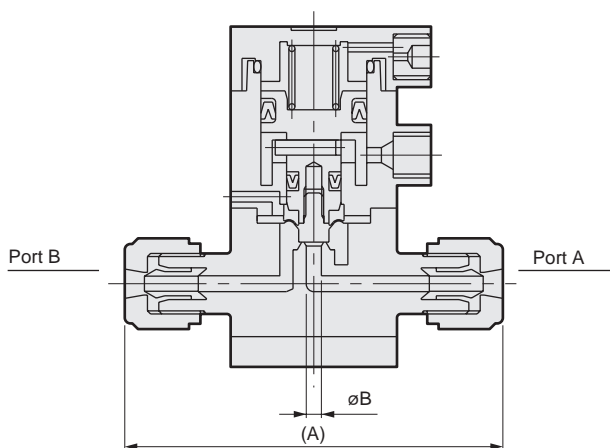
## Dimensions

- Rc thread
- AMDZ\*6-2



- Integrated fitting
- AMDZ\* -  $\boxed{*1}^{-2}$

- With flow rate adjustment

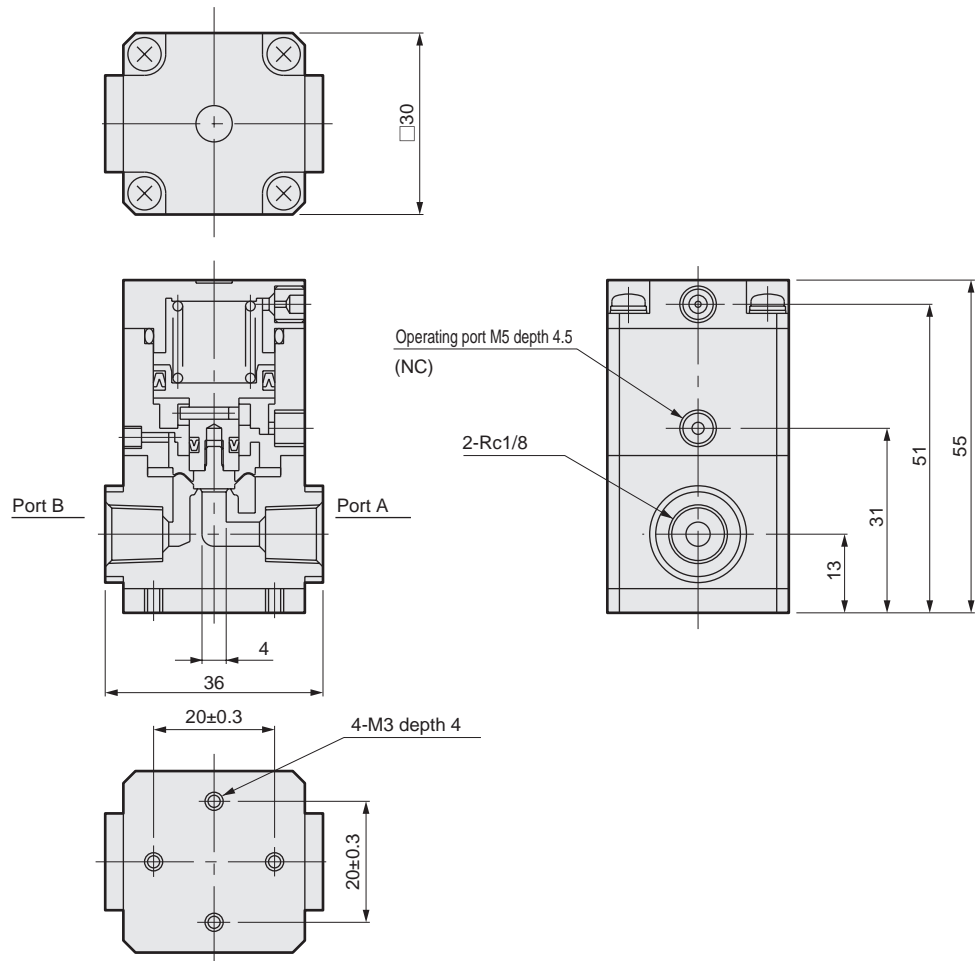


Dimensions	A	B	C	D	E	F	MAX G
*1 (Connector No.)							
6	-	2	11	28	41	45	63
3US, 3UP	50	2	11	28	41	45	63
6BUS, 6BUP	50	2	11	28	41	45	63
3UF	40	2	11	28	41	45	63
3UR	57	1.6	11	28	41	45	63
6BUR	57	1.6	11	28	41	45	63
6UR	82	3.5	12	31	44	48	66
8BUR	84	3.5	12	31	44	48	66

### Dimensions

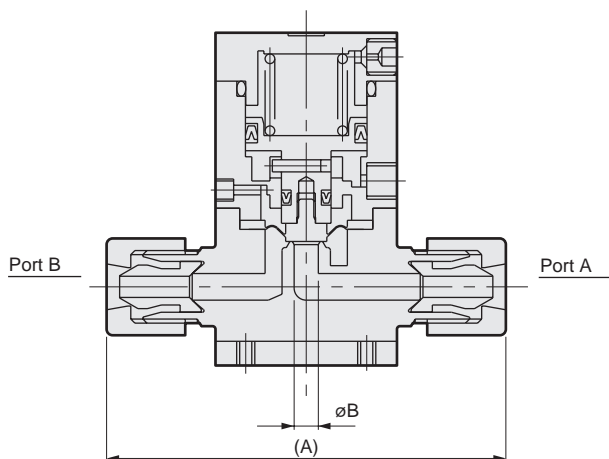
#### ● Rc thread

• AMD0\*6-4

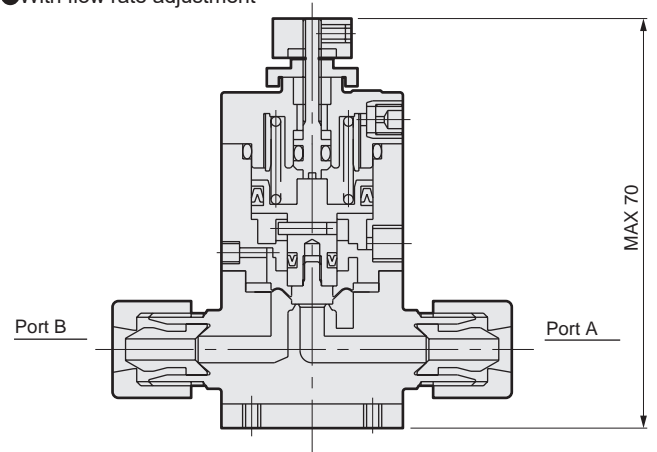


#### ● Integrated fitting

• AMD0\*- \*1 -4



#### ● With flow rate adjustment



Dimensions	A	B
<span style="border: 1px solid black; padding: 0 2px;">*1</span> (Connector No.)		
6US	66	4
8BUS	66	4
6UP	68	4
8BUP	68	4

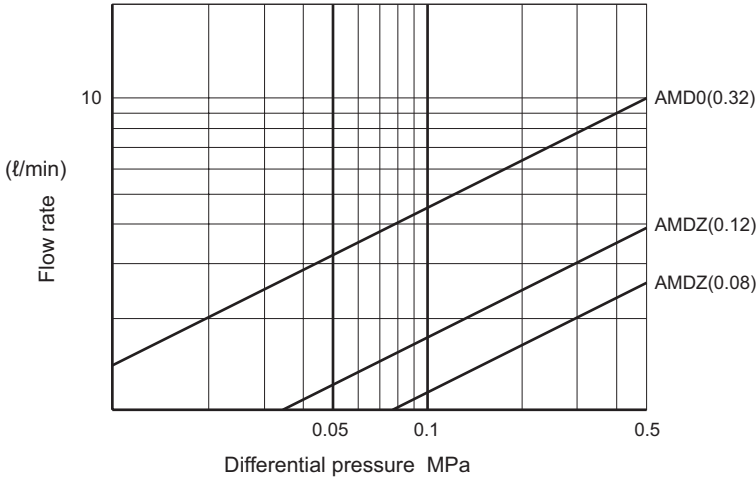
Dimensions	A	B
<span style="border: 1px solid black; padding: 0 2px;">*1</span> (Connector No.)		
6UF	64	4
8BUF	64	4
6UR	90	3.5
8BUR	92	3.5
6UK	71	4
8BUK	71	4
8BUW	86	3

Part3R	Part2	Part1
High pressure	High pressure	High pressure
Metal-free	Metal-free	Metal-free
Large bore size	Large bore size	Large bore size
Polyvinyl chloride	Polyvinyl chloride	Polyvinyl chloride
Drainage	Drainage	Drainage
Part3RN	Part2	Part1
High pressure	High pressure	High pressure
Metal-free	Metal-free	Metal-free
Large bore size	Large bore size	Large bore size
Single unit	Single unit	Single unit
Air operated integrated	Air operated integrated	Air operated integrated
Regulator	Regulator	Regulator
Flow rate adjusting valve	Flow rate adjusting valve	Flow rate adjusting valve
Manual Fine flow rate	Manual Fine flow rate	Manual Fine flow rate
Fine level Switch	Fine level Switch	Fine level Switch
Related products	Related products	Related products

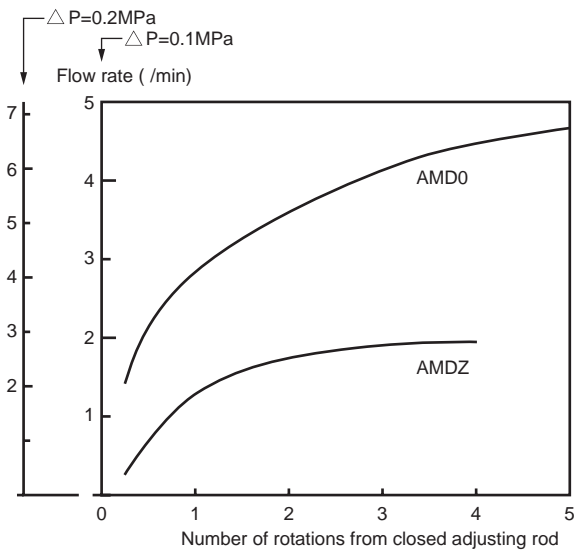
Flow characteristics

AMDZ / AMD0

- Flow characteristics (water)  
Differential pressure - internal flow rate ( ) : Cv



- With flow rate adjustment (water)  
Rotations - flow rate



\*1: Vibration and flow rate fluctuation may occur depending on the working conditions such as fluid temperature, differential pressure, and opening. Confirm that the product is acceptable under actual working conditions before use. For precise flow rate adjustment, select the FMD Series or Fine flow rate adjusting valve (LYX).