



Air operated valve for chemical liquids

AMD0¹₃2 Series

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



Specifications

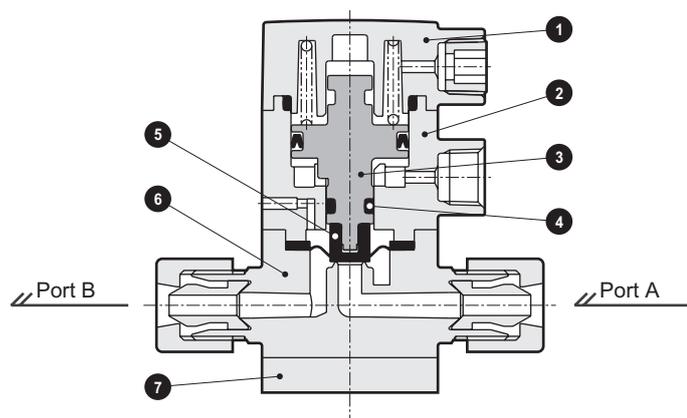
Item	AMD0 ¹ ₃ 2*-4	
Working fluid	Pure water, chemical liquids, air, N ₂ gas (*1)	
Fluid temperature °C	5 to 100 (*2)	
Proof pressure MPa	1.0	
Working pressure (A→B) MPa	0 to 0.5	
Working pressure (B→A) MPa	0 to 0.3	
Valve seat leakage cm ³ /min	0 (water pressure)	
Back pressure MPa	0 to 0.3	
Ambient temperature °C	0 to 60	
Frequency	30 cycles/min. or less	
Mounting orientation	Unrestricted	
Connection	Rc1/8, O.D. ø6 tube connection (integrated fitting), OD1/4" tube connection (integrated fitting)	
Orifice size	ø3.5	ø4
Cv value	0.28	0.32
Operating section	Operating pressure MPa	NC/NO 0.35 to 0.5, double acting 0.3 to 0.4 (0.2 to 0.3 for fluid code "P")
	Operating port	Rc1/8
Weight kg	0.09	

*1: Check the compatibility of product structural materials, working fluids and atmosphere.

*2: For use with hydrofluoric acid, or when the fluid temperature exceeds 40°C, consult with CKD.

*3: Refer to pages 46 to 47 for flow characteristics.

Internal structure and parts list

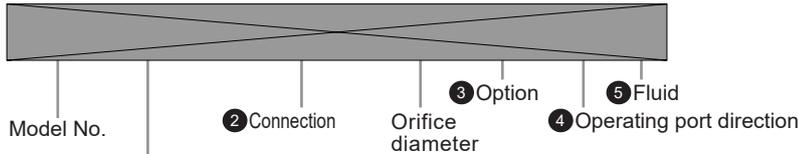


Part No.	Part name	Material (by fluid code)		
		Standard	M	P
1	Cover	PPS		PP
2	Cylinder	PPS		PP
3	Piston rod	PPS		PVDF
4	O-ring	FKM	EPDM	FKM
5	Diaphragm	PTFE		
6	Body	PFA, PTFE		
7	Mounting plate	PPS		PP

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



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

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 20 Series Integrated fitting	F-LOCK 60 Series Integrated fitting	Final Lock Fitting Integrated	Flaretek Fitting Integrated							
	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection	ø6xø4 tube connection
	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection	1/4" x 5/32" tube connection

Code	Description	Orifice size	Body material										
			PFA: PFA molded body, PTFE: PTFE machined body										
0	ON/OFF only	ø4	PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA	PTFE
1	With flow rate adjustment	ø3.5											
6	ON/OFF / with indicator	ø4											
		ø3											

4 Operating port direction		Body material												
4	<p>With valve viewed from above, ← indicates fluid flow direction, ⇌ indicates the operating port direction</p>	●	●	●	●	●	●	●	●	●	●	●	●	●
1		●	●	●	●	●	●	●	●	●	●	●	●	●
2		●	●	●	●	●	●	●	●	●	●	●	●	●
3		●	●	●	●	●	●	●	●	●	●	●	●	●

5 Fluid code		Body material												
Blank	Standard	●	●	●	●	●	●	●	●	●	●	●	●	●
M	For ammonia	●	●	●	●	●	●	●	●	●	●	●	●	●
P	For nitric acid	●	●	●	●	●	●	●	●	●	●	●	●	●

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

● Bottom mounting model No. (hyphens between and indication of orifice size are not required 3 4)



Bottom mounting

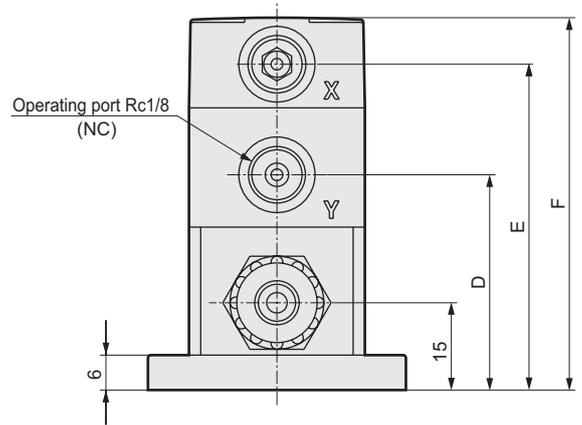
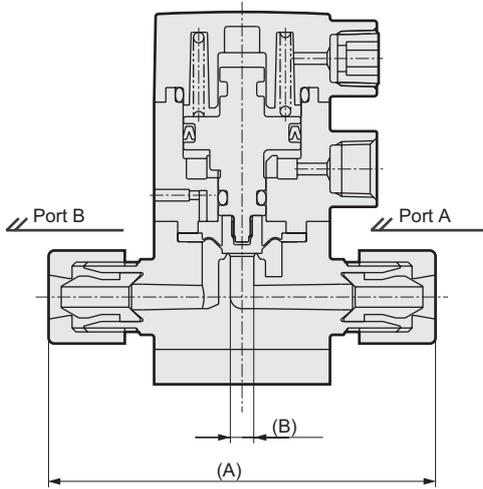
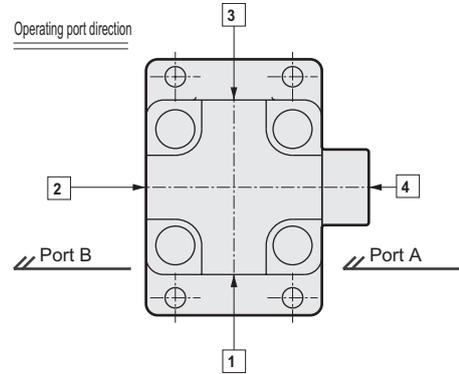
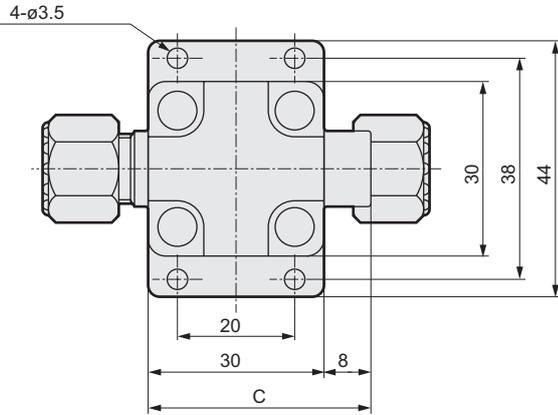
Air operated valve	Part3R	High pressure	Part2	Metal-free	Part1	Large bore size	Polyvinyl chloride	Drainage	
	Part3RR		Part2		Part1				
	Manual valve		High pressure		Metal-free				Large bore size
	Single unit		Air operated Integrated		Pilot				Manual
Flow rate adjusting valve	Electric	Manual flow rate	Manual	Manual Fine flow rate	Fine level Switch	Related products			
	Manual		Manual						
	Regulator		Manual						

AMD0¹₂²₃ Series

Dimensions

● ON/OFF only

· AMD0¹₂²₃-[*1]-4-0-*



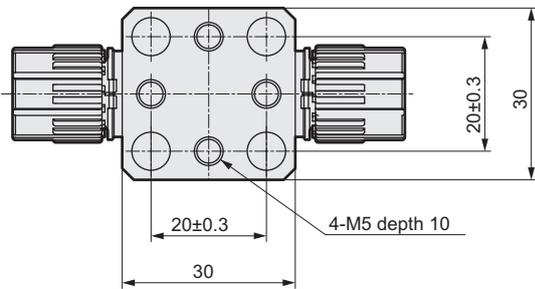
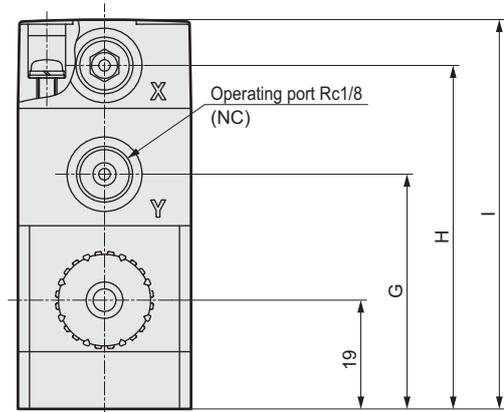
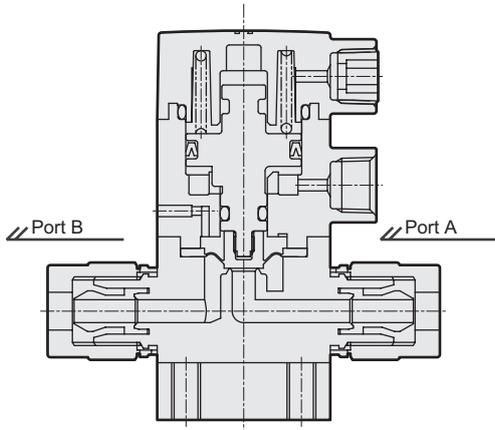
*1 Connector No.	A	B
6	36	4
6US	66	4
8BUS	66	4
6UP	68	4
8BUP	68	4

*1 Connector No.	A	B
6UF	64	4
8BUF	64	4
6UR	90	3.5
8BUR	92	3.5
6UK	71	4
8BUK	71	4
8BUW	86	3

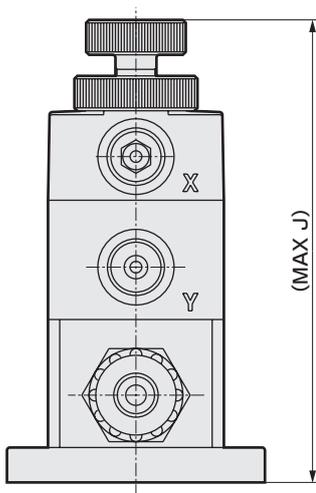
Fluid code	C	D	E	F
Blank/M	38	37	56	64
P	35	36	57	65

Dimensions

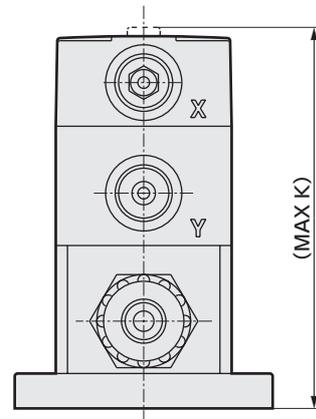
● Bottom mounting



● With flow rate adjustment



● With indicator



Fluid code	G	H	I	J	K
Blank/M	41	60	68	81	66
P	40	61	69	87	67

When bottom mounting is selected, dimensions J and K will be 4 mm higher.

Air operated valve	Part3R	Part2	Part1	High pressure	Metals-free	Large bore size	Polyvinyl chloride	Drainage
	Part3RR	Part2	Part1	High pressure	Metals-free	Large bore size	Polyvinyl chloride	Drainage
	Manual valve	High pressure	Metals-free	Large bore size	Single unit	Air operated integrated	Pilot	Manual
Flow rate adjusting valve	Electric	Manual	Manual	Manual	Manual	Manual	Manual	Manual
	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
Related products	Related products	Related products	Related products	Related products	Related products	Related products	Related products	Related products



Air operated valve for chemical liquids

AMD3¹/₂2/AMD4¹/₂2/AMD5¹/₂2 Series

● Connection tube size: ø10, ø12, ø25, 3/8", 1/2", 3/4", 1"



Export controlled items

*Eligibility: AMD4*2, 5*2

Specifications

Item	AMD3 ¹ / ₂ 2-* ¹ -8				AMD3 ¹ / ₂ 2-* ¹ -10		
Working fluid	Chemical liquids, pure water, air, N2 gas (*1)						
Fluid temperature °C	5 to 90 (For high temperature: 5 to 160) (*5)						
Proof pressure MPa	1.0						
Working pressure (A→B)MPa	0 to 0.3 (*3...High pressure specification)						
Working pressure (B→A)MPa	0 to 0.1 (*3...High pressure specification)						
Valve seat leakage cm ³ /min	0 (water pressure)						
Back pressure MPa	0 to 0.1 (*3...High pressure specification)						
Ambient temperature°C	0 to 60						
Frequency	30 cycles/min. or less						
Mounting orientation	Unrestricted						
Connection	O.D. ø10 tube connection (integrated fitting) O.D. 3/8" tube connection (integrated fitting)				O.D. ø12 tube connection (integrated fitting) O.D. 1/2" tube connection (integrated fitting)		
Orifice size	ø6.3	ø6.4	ø7.5	ø8	ø9.4	ø9.5	ø10
Cv value	0.8		1.25		1.8		
Bypass orifice size (with bypass)	ø2.3						
Operating section	Operating pressure MPa	NC 0.3 to 0.5, NO 0.3 to 0.5 (0.3 to 0.35 for high temperature), double acting 0.3 to 0.4 (0.2 to 0.25 for high temperature)					
	Operating port	Rc1/8 (*2)					
Weight kg	0.21						

Item	AMD4 ¹ / ₂ 2-* ¹ -16		AMD5 ¹ / ₂ 2-* ¹ -20		
Working fluid	Chemical liquids, pure water, air, N2 gas (*1)		Chemical liquids, pure water, air, N2 gas (*1)		
Fluid temperature °C	5 to 90 (For high temperature: 5 to 160) (*5)		5 to 90 (*6)		
Proof pressure MPa	1		1		
Working pressure (A→B) MPa	0 to 0.3 (*3...High pressure specification)		0 to 0.3 (*3...High pressure specification)		
Working pressure (B→A)MPa	0 to 0.1 (*3...High pressure specification)		0 to 0.1 (*3...High pressure specification)		
Valve seat leakage cm ³ /min	0 (water pressure)		0 (water pressure)		
Back pressure MPa	0 to 0.1 (*3...High pressure specification)		0 to 0.1 (*3...High pressure specification)		
Ambient temperature°C	0 to 60		0 to 60		
Frequency	20 cycle/min. or less		20 cycle/min. or less		
Mounting orientation	Unrestricted		Unrestricted		
Connection	O.D. 3/4" tube connection (integrated fitting)		O.D. ø25 tube connection (integrated fitting)/ O.D. 1" tube connection (integrated fitting) Nominal 16/20 (PVC union integrated fitting)		
Orifice size	ø16		ø20		
Cv value	5		8		
Bypass orifice size (with bypass)	ø6		ø6		
Operating section	Operating pressure MPa	NC: 0.3 to 0.5, NO: 0.3 to 0.5 (0.3 to 0.35 for high temperature), Double acting: 0.3 to 0.4 (0.2 to 0.25 for high temperature)		NC/NO: 0.3 to 0.5, double acting: 0.3 to 0.4	
	Operating port	Rc1/8 (*2)		Rc1/8 (*7)	
Weight kg	0.42		0.84		

*1: Check the compatibility of product structural materials, working fluids and atmosphere.

*2: Use a resin fitting for connection to the operating port. (When using a metal fitting, select one with a reinforcing ring. However, a reinforcing ring cannot be selected for those with fluid code P for nitric acid and hydrofluoric acid.)

*3: Refer to page 64 for high-pressure specifications.

*4: Refer to pages 46 to 47 for flow characteristics.

*5: For use with hydrofluoric acid, or when the fluid temperature exceeds 40°C, consult with CKD.

*6: 5 to 50°C when the integrated PVC union fitting is used for connection. For use with hydrofluoric acid, or when the fluid temperature exceeds 40°C, consult with CKD.

*7: Use a resin fitting for connection to the operating port. (When using a metal fitting, select one with reinforcing ring. However, a reinforcing ring cannot be selected for those with fluid code P for nitric acid and hydrofluoric acid.) However, since the integrated PVC union fitting comes with reinforcing ring, a metal fitting can also be used.

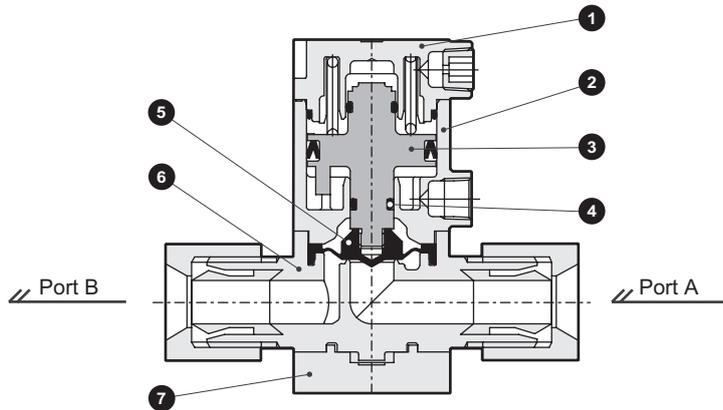
! Always read the precautions on Intro Pages 7 to 14 before use.

AMD3¹₂²/₃2/AMD4¹₃²/₃2/AMD5¹₃²/₃2 Series

Internal structure and parts list

Internal structure and parts list

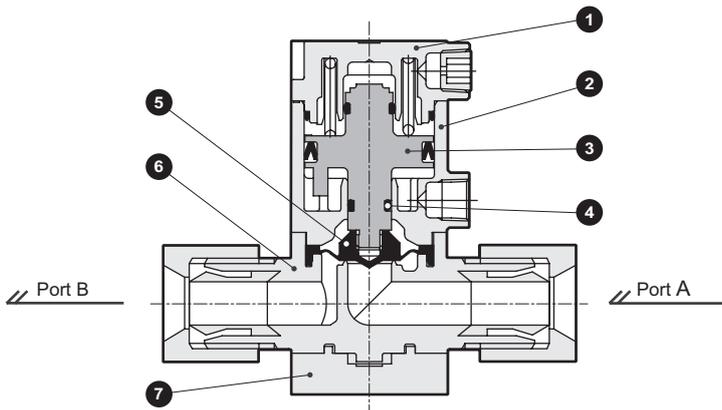
●AMD3*2 Series



Part No.	Part name	Material (by fluid code)		
		Standard	M	P
1	Cover	PPS		PP
2	Cylinder	PPS		PP
3	Piston rod	PPS		PVDF
4	O-ring	FKM	EPDM	FKM
5	Diaphragm	PTFE		
6	Body	PFA, PTFE		
7	Mounting plate	PPS		PP

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

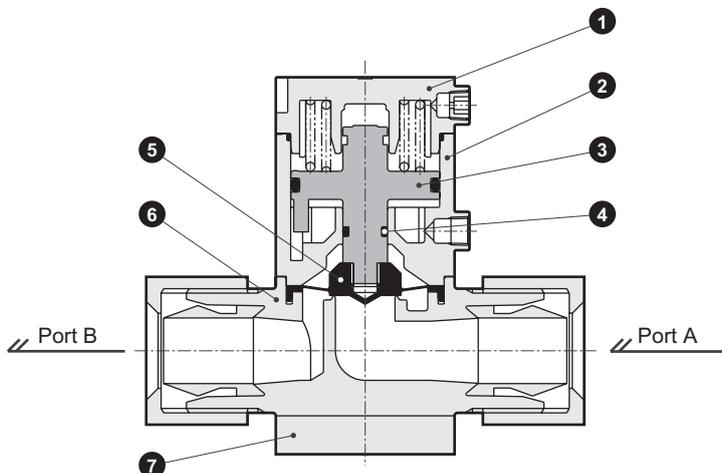
●AMD4*2 Series



Part No.	Part name	Material (by fluid code)		
		Standard/Y/E	M	P
1	Cover	PPS		PP
2	Cylinder	PPS		PP
3	Piston rod	PPS		PVDF
4	O-ring	FKM	EPDM	FKM
5	Diaphragm	PTFE		
6	Body	PFA, PTFE		
7	Mounting plate	PPS		PP

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

●AMD5*2 Series



Part No.	Part name	Material (by fluid code)		
		Standard	M	P
1	Cover	PPS		PP
2	Cylinder	PPS		PP
3	Piston rod	PPS		PVDF
4	O-ring	FKM	EPDM	FKM
5	Diaphragm	PTFE		
6	Body	PFA, PTFE		
7	Mounting plate	PPS		PP

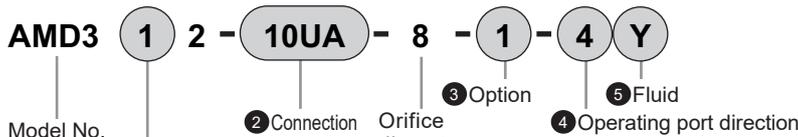
The material and structure may vary depending on the model number. Contact CKD for details.

Air operated valve	Part3R	High pressure	Metal-free	Large bore size	Polyvinyl chloride	Drainage
	Part2					
	Part1					
Manual valve	Part3RR	High pressure	Metal-free	Large bore size	Single unit	Air operated integrated
	Part2					
	Part1					
Regulator	Pilot	Flow rate adjusting valve	Manual	Manual	Manual	Manual
	Manual					
	Electric					
Flow rate adjusting valve	Manual	Manual	Manual	Manual	Manual	Manual
	Manual					
	Manual					
Flow rate adjusting valve	Manual	Manual	Manual	Manual	Manual	Manual
	Manual					
	Manual					
Flow rate adjusting valve	Manual	Manual	Manual	Manual	Manual	Manual
	Manual					
	Manual					
Flow rate adjusting valve	Manual	Manual	Manual	Manual	Manual	Manual
	Manual					
	Manual					

AMD3²₃/AMD4²₃/AMD5²₃ Series

How to order

●AMD3*2 Series (connection: ø10, 3/8" tube connection)



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

2 Connection		10US	10BUS	10UP	10BUP	10UA	10BUA	10UR	10BUR	10UK	10BUK	10BUW
		Super Type Pillar fitting Integrated	Super 300 Pillar fitting P series integrated	F-LOCK 20A Series Integrated fitting	F-LOCK 60 Series Integrated fitting	Final Lock Fitting Integrated	Flaretek Fitting Integrated					
		ø10xø8 tube connection	3/8"x1/4" tube connection	ø10xø8 tube connection	3/8"x1/4" tube connection	ø10xø8 tube connection	3/8"x1/4" tube connection	ø10xø8 tube connection	3/8"x1/4" tube connection	ø10xø8 tube connection	3/8"x1/4" tube connection	3/8"x tube connection

Code	Description	Orifice size	Body material									
		ø8	PFA: PFA molded body, PTFE: PTFE machined body									
0	ON/OFF only		PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA
1	With flow rate adjustment		PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
2	With bypass		PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
3	With flow rate adjustment/bypass		PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
6	ON/OFF with indicator		PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA	PFA
7	With bypass with indicator		PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE

4 Operating port direction													
4		●	●	●	●	●	●	●	●	●	●	●	●
1		●	●	●	●	●	●	●	●	●	●	●	●
2		●	●	●	●	●	●	●	●	●	●	●	●
3		●	●	●	●	●	●	●	●	●	●	●	●

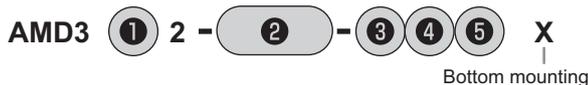
5 Fluid code													
Blank	Standard	●	●	●	●	●	●	●	●	●	●	●	●
M	For ammonia	●	●	●	●	●	●	●	●	●	●	●	●
P	For nitric acid, for hydrofluoric acid (*3)	●	●	●	●	●	●	●	●	●	●	●	●
Y	For high temperature (5 to 160°C) (*2)	●	●	●	●	●	●	●	●	●	●	●	●
E	For high temperature (5 to 160°C), PTFE cut body (*2)	●	●	●	●	●	●	●	●	●	●	●	●

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

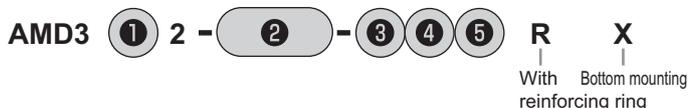
●Model No. of operating port with reinforcing ring (hyphen between ³ ⁴ is not required)



●Bottom mounting model No. (hyphen between ³ ⁴ and indication of orifice size are not required)



●Operating port with reinforcing ring + bottom mounting model No. (hyphen between ³ ⁴ and indication of orifice size are not required)



⚠️ Precautions for model No. selection

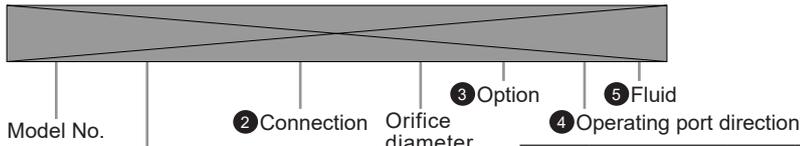
*1: Since the Final Lock Fitting Nut and operating air piping may interfere, be sure to check the dimensions before making the selection.

*2: Item ³ is not available if the option is 2 (with bypass), 3 (with flow rate adjustment/bypass) or 7 (with bypass/with indicator). It cannot be used for nitric acid or hydrofluoric acid.

*3: If P is selected in ⁵, R with reinforcing ring cannot be selected. If in item ³ the option is 2 (with bypass), 3 (with flow rate adjustment/bypass) or 7 (with bypass/with indicator), it is not available.

How to order

●AMD3*2 Series (connection: ø12, 1/2" tube connection)



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

② Connection		12US	15BUS	12UP	15BUP	12UA	15BUA	12UR	15BUR	12UK	15BUK	15BUW
		Super Type Pillar fitting Integrated	Super 300 Pillar fitting P series integrated	F-LOCK 20A Series Integrated fitting	F-LOCK 60 Series Integrated fitting	Final Lock Fitting Integrated	Flaretek Fitting Integrated					
		ø12xø10 tube connection	1/2" x 3/8" tube connection	ø12xø10 tube connection	1/2" x 3/8" tube connection	ø12xø10 tube connection	1/2" x 3/8" tube connection	ø12xø10 tube connection	1/2" x 3/8" tube connection	12xø10 tube connection	1/2" x 3/8" tube connection	1/2" x 3/8" tube connection

Code	Description	Orifice size	
		ø10	
		ø9.5	
		ø10	
		ø9.4	
③ Option (*1)			
Body material			
PFA: PFA molded body, PTFE: PTFE machined body			
0	ON/OFF only	PFA	PFA
1	With flow rate adjustment	PFA	PFA
2	With bypass	PTFE	PFA
3	With flow rate adjustment/bypass	PTFE	PFA
6	ON/OFF / with indicator	PFA	PFA
7	With bypass with indicator	PTFE	PFA

④ Operating port direction															
4	<p>With valve viewed from above, ← indicates fluid flow direction ← and operating port direction.</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●
1		●	●	●	●	●	●	●	●	●	●	●	●	●	●
2		●	●	●	●	●	●	●	●	●	●	●	●	●	●
3		●	●	●	●	●	●	●	●	●	●	●	●	●	●

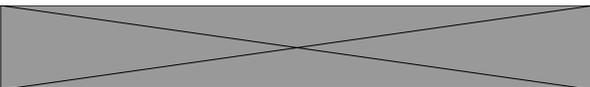
⑤ Fluid															
Blank	Standard	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M	For ammonia	●	●	●	●	●	●	●	●	●	●	●	●	●	●
P	For nitric acid, for hydrofluoric acid (*3)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Y	For high temperature (5 to 160°C) (*2)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E	For high temperature (5 to 160°C), PTFE cut body (*2)	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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

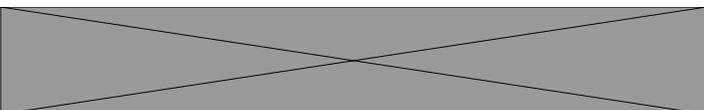
●Model No. of operating port with reinforcing ring (hyphen between ③ ④ is not required)



●Bottom mounting model No. (hyphen between ③ ④ and indication of orifice size are not required)



●Operating port with reinforcing ring + bottom mounting model No. (hyphen between ③ ④ and indication of orifice size are not required)



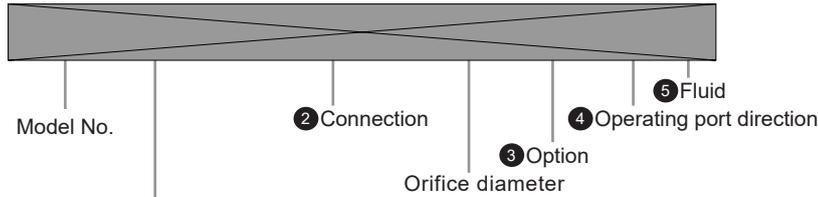
⚠️ Precautions for model No. selection

- *1: Since the Final Lock Fitting Nut and operating air piping may interfere, be sure to check the dimensions before making the selection.
- *2: Item ⑤ is not available if the option is 2 (with bypass), 3 (with flow rate adjustment/bypass) or 7 (with bypass/with indicator). It cannot be used for nitric acid or hydrofluoric acid.
- *3: If P is selected in ⑤, R with reinforcing ring cannot be selected. Item ③ is not available if the option is 2 (with bypass), 3 (with flow rate adjustment/bypass) or 7 (with bypass/with indicator).

Part3R	Part2	Part1	High pressure	Metah-free	Large bore size	Polyvinyl chloride	Drainage	Part3RR	Part2	High pressure	Metah-free	Large bore size	Single unit	Air operated integrated	Pilot	Manual	Electric	Manual	Manual Fine flow rate	Fine level Switch	Related products
--------	-------	-------	---------------	------------	-----------------	--------------------	----------	---------	-------	---------------	------------	-----------------	-------------	-------------------------	-------	--------	----------	--------	-----------------------	-------------------	------------------

AMD3²₃/AMD4²₃/AMD5²₃ Series

How to order



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

② Connection					
20BUS	20BUP	20BUA	20BUR	20BUK	20BUW
Super-type pillar integrated fitting	Super 300 type Pillar fitting P Series integrated	F-LOCK 20A Series Integrated fitting	F-LOCK 60 Series Integrated fitting	Final Lock Integrated fitting	Flaretek Integrated fitting
3/4" x5/8" tube connectin					

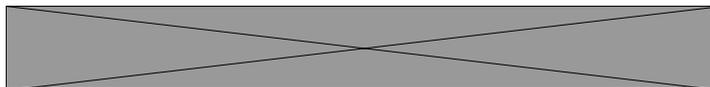
Code	Description	Orifice size					
		ø16		ø15.9	ø16	ø14.7	
③ Option		Body material					
		PFA: PFA molded body, PTFE: PTFE machined body					
0	ON/OFF only	PFA	PFA	PTFE	PFA	PTFE	PFA
1	With flow rate adjustment						
2	With bypass	PFA	PFA	PTFE	PTFE	PTFE	PTFE
3	With flow rate adjustment/bypass						
6	ON/OFF with indicator	PFA	PFA	PTFE	PFA	PTFE	PFA
7	With bypass with indicator	PFA	PFA	PTFE	PTFE	PTFE	PTFE

④ Operating port direction							
4	<p>With valve viewed from above, ← indicates fluid flow direction and operating port direction.</p>	●	●	●	●	●	●
1		●	●	●	●	●	●
2		●	●	●	●	●	●
3		●	●	●	●	●	●

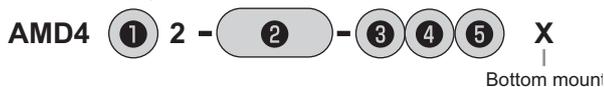
⑤ Fluid							
Blank	Standard	●	●	●	●	●	●
M	For ammonia	●	●	●	●	●	●
P	For nitric acid, for hydrofluoric acid (*2)	●	●	●	●	●	●
Y	For high temperature (5 to 160°C) (*1)	●	●				
E	For high temperature (5 to 160°C), PTFE cut body (*1)	●	●	●		●	

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

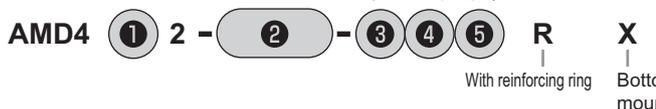
● Model No. of operating port with reinforcing ring (hyphen between ③ ④ is not required)



● Bottom mounting model No. (hyphens between and indication of orifice size are not required ③ ④)



● Operating port with reinforcing ring + bottom mounting model No. (hyphens between and indication of orifice size are not required ③ ④)

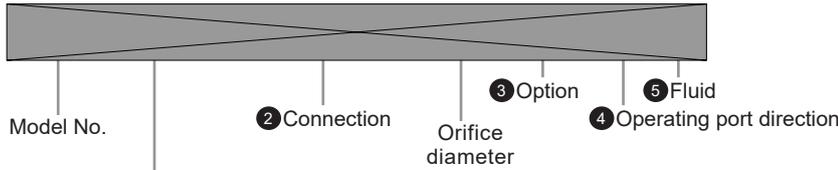


⚠ Precautions for model No. selection

*1: Item ③ is not available if the option is 2 (with bypass), 3 (with flow rate adjustment/bypass) or 7 (with bypass/with indicator). It cannot be used for nitric acid or hydrofluoric acid.

*2: If P is selected in ⑤, R with reinforcing ring cannot be selected. If in item ③ the option is 2 (with bypass), 3 (with flow rate adjustment/bypass) or 7 (with bypass/with indicator), it is not available.

How to order



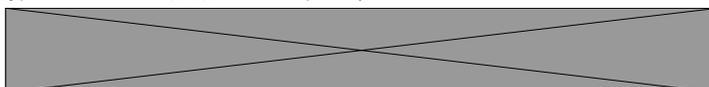
1 Actuation	
1	NC (normally closed)
2	NO (normally open)
3	Double acting

2 Connection											
25US	25BUS	25UP	25BUP	25BUA	25UR	25BUR	25UK	25BUK	25BUW	15AU	20AU
Super Type Pillar fitting Integrated		Super 300 Pillar fitting P series integrated		F-LOCK 20A Series Fitting Integrated	F-LOCK 60 Series Integrated fitting		Final Lock Fitting Integrated		Flaretek Fitting Integrated	PVC union Fitting Integrated	
ø25x22 tube connection	1" x 7/8" tube connection	ø25x22 tube connection	1" x 7/8" tube connection	1" x 7/8" tube connection (*1)	ø25x tube connection	1" x 7/8" tube connection	ø25x tube connection	1" x 7/8" tube connection	1" x 7/8" tube connection	Nominal 16	Nominal 20

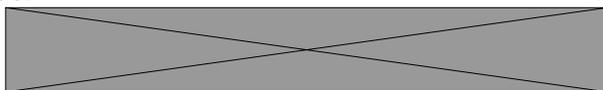
Code	Description	Orifice size	ø20											
3 Option			Body material											
			PFA: PFA molded body, PTFE: PTFE machined body											
0	ON/OFF only		PFA	PFA	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PFA			
1	With flow rate adjustment													
2	With bypass		PTFE	PFA	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	(*3)			
3	With flow rate adjustment/bypass													
6	ON/OFF / with indicator		PFA	PFA	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	PFA			
7	With bypass with indicator		PTFE	PFA	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE	(*3)			
4 Operating port direction														
4	With valve viewed from above, ← indicates fluid flow direction and operating port direction.		●	●	●	●	●	●	●	●	●	●	●	
1			●	●	●	●	●	●	●	●	●	●	●	●
2			●	●	●	●	●	●	●	●	●	●	●	●
3			●	●	●	●	●	●	●	●	●	●	●	●
5 Fluid														
Blank	Standard		●	●	●	●	●	●	●	●	●	●	●	
M	For ammonia		●	●	●	●	●	●	●	●	●	●	●	
P	For nitric acid, for hydrofluoric acid (*2)		●	●	●	●	●	●	●	●	●	●	●	

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

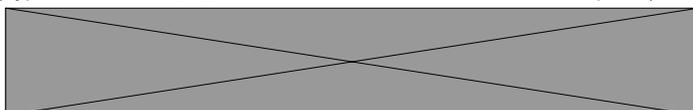
● Model No. of operating port with reinforcing ring (hyphen between 3 4 is not required)



● Bottom mounting model No. (hyphen between 3 4 and indication of orifice size are not required)



● Operating port with reinforcing ring + bottom mounting model No. (hyphen between 3 4 and indication of orifice size are not required)



⚠ Precautions for model No. selection

- *1: It can also be used for ø25 x ø22 tube connection.
- *2: If 15AU or 20AU is selected in 2 or P is selected in 5, R with reinforcing ring cannot be selected. It is not available if the option in 3 is 2 (with bypass), 3 (with flow rate adjustment/bypass) or 7 (with bypass/with indicator).
- *3: Select from the AMD41L Series (page 88).

Part3R	Part2	Part1	High pressure	Metah-free	Large bore size	Polyvinyl chloride	Drainage	Part3RR	Part2	High pressure	Metah-free	Large bore size	Single unit	Air operated	Pilot	Manual	Electric	Manual	Manual Fine flow rate	Fine level Switch	Related products
			Air operated valve							Manual valve			Drip prevention valve	Integrated	Regulator		Flow rate adjusting valve				

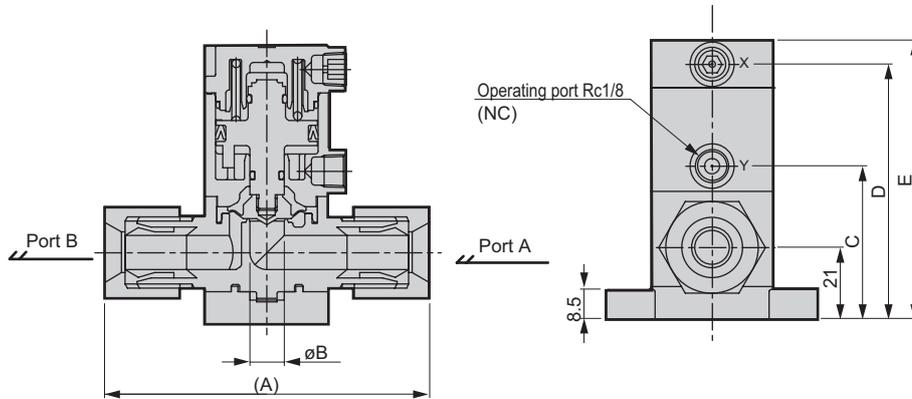
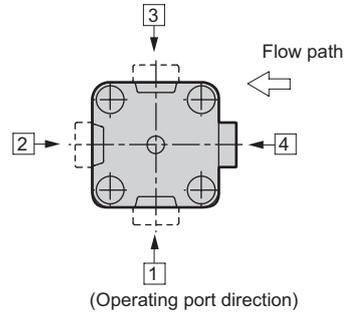
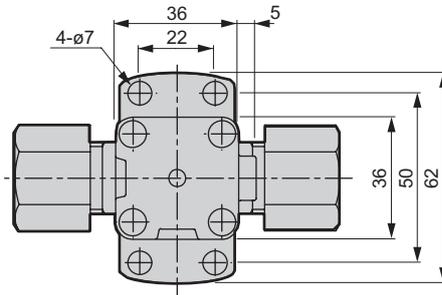
AMD3¹₃²2/AMD4¹₃²2/AMD5¹₃²2 Series

Dimensions

● ON/OFF only

· AMD3¹₃²2-[*1]-8

· AMD3¹₃²2-[*1]-10

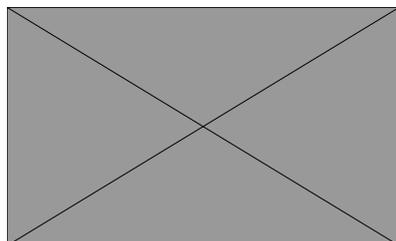


*1 (Connector No.)	A	B
10US	86	8
10BUS	86	8
10UP	86	8
10BUP	86	8
10UA	78	8
10BUA	78	8
10UR	110	7.5
10BUR	114	6.4
10UK	96	7.5
10BUK	96	7.5
10BUW	97	6.3

*1 (Connector No.)	A	B
12US	95	10
15BUS	95	10
12UP	94	10
15BUP	94	10
12UA	86	10
15BUA	86	10
12UR	110	9.5
15BUR	114	9.5
12UK	102	10
15BUK	102	10
15BUW	103	9.4

Fluid code	C	D	E
Blank/M/P/Y	45	75	82
E	49	79	86

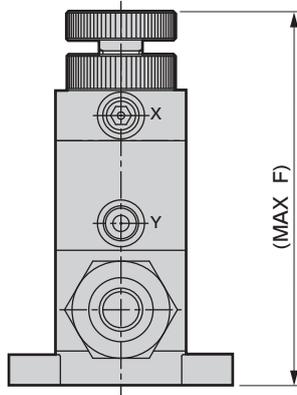
● Bottom mounting



Dimensions

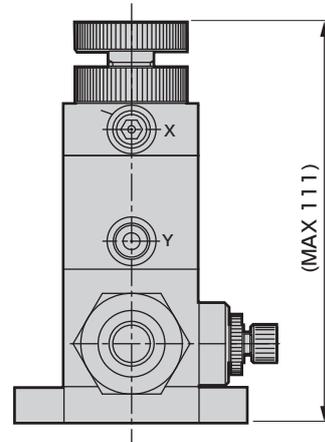
●With flow rate adjustment

·AMD3¹₂²/₃2-*-*-1



●With flow rate adjustment bypass

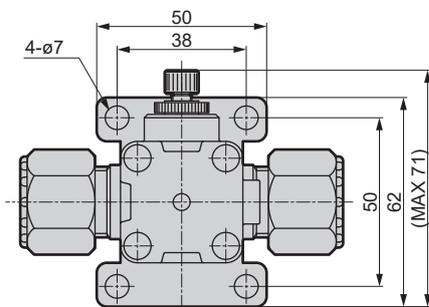
·AMD3¹₂²/₃2-*-*-3



(For other dimensions, refer to the dimensions with bypass.)

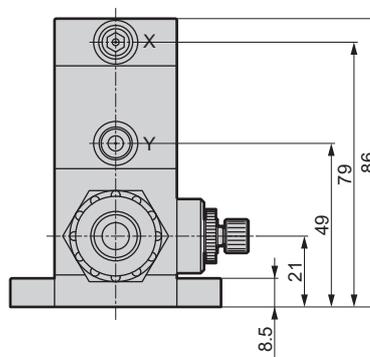
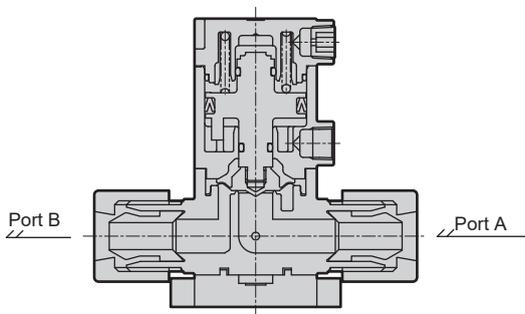
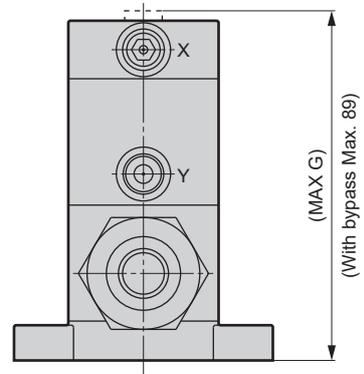
●With bypass

·AMD3¹₂²/₃2-*-*-2/7



●With indicator

·AMD3¹₂²/₃2-*-*-6/7



Fluid code	F	G
Blank/M/P/Y	107	85
E	110	88

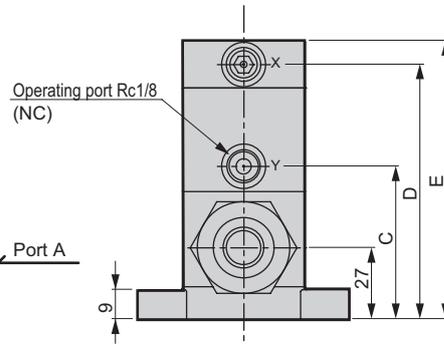
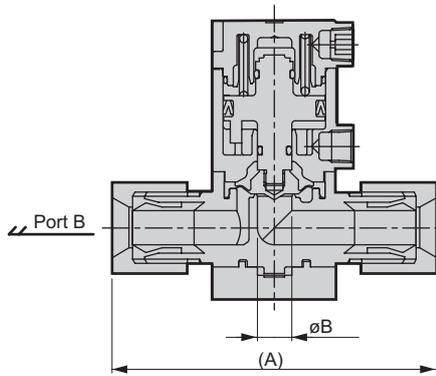
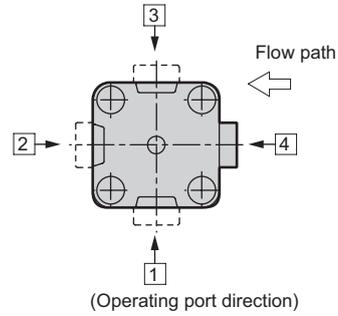
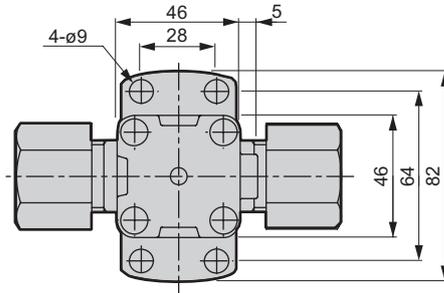
Air operated valve	Part3R	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
	Part3RR	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
	Manual valve	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
Regulator	Manual	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
	Manual	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
Flow rate adjusting valve	Manual	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
	Manual	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
Fine level Switch	Manual	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
	Manual	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
Related products	Manual	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage
	Manual	High pressure	Part2	High pressure	Part1	Large bore size	Polymethyl chloride	Drainage

AMD3¹₂²/₃/AMD4¹₂²/₃/AMD5¹₂²/₃ Series

Dimensions

●ON/OFF only

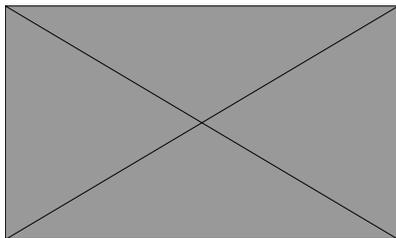
·AMD4¹₂²/₃-[*1]-16



*1 (Connector No.)	A	B
20BUS	124	16
20BUP	118	16
20BUA	108	16
20BUR	134	15.9
20BUK	119	16
20BUW	122	14.7

Fluid code	C	D	E
Blank/M/Y	60	97	106
P	60	97	107
E	64	101	110

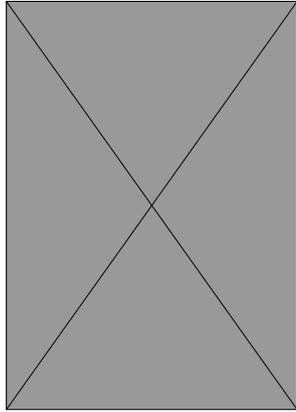
●Bottom mounting



Dimensions

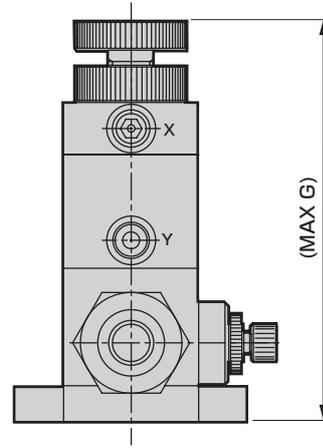
●With flow rate adjustment

· AMD4¹₂²/₃2*-16-1



●With flow rate adjustment bypass

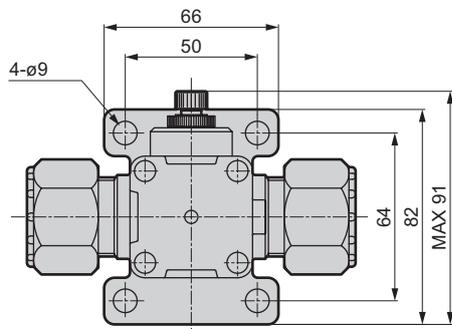
· AMD4¹₂²/₃2*-16-3



(For other dimensions, refer to the dimensions with bypass.)

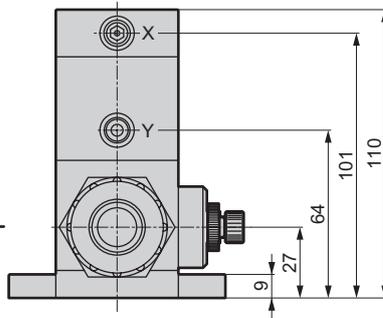
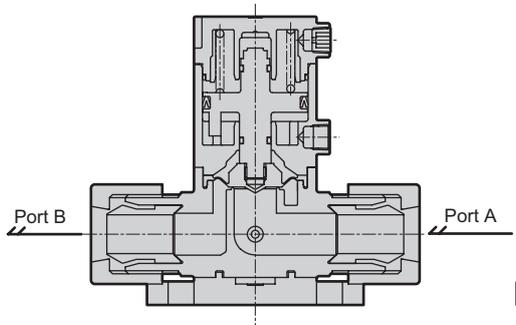
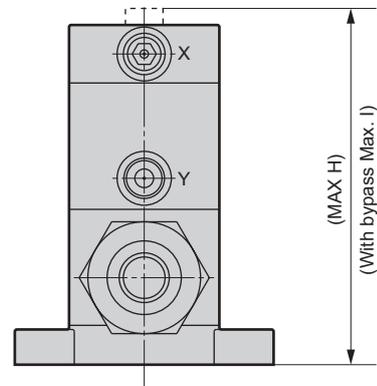
●With bypass

· AMD4¹₂²/₃2*-16-2/7



●With indicator

· AMD4¹₂²/₃2*-16-6/7



Fluid code	F	G	H	I
Blank/M	130	134	110	114
P	133	137	111	115
Y	130		110	
E	134		114	

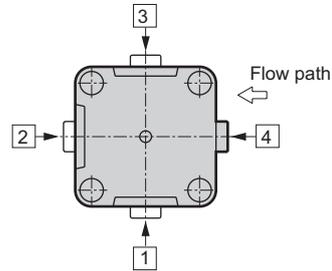
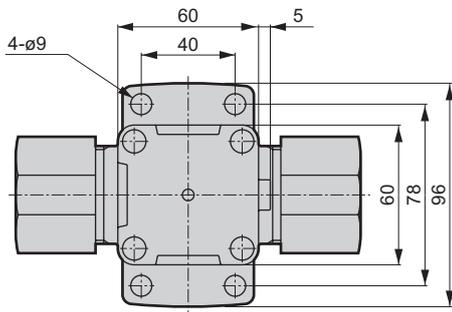
Part3R	Part2	Part1	High pressure	Metals-free	Large bore size	Polyvinyl chloride	Drainage	Part3RR	Part2	High pressure	Metals-free	Large bore size	Single unit	Air operated integrated	Pilot	Manual	Electric	Manual	Manual Fine flow rate	Fine level Switch	Related products
			Air operated valve						Manual valve				Drip prevention valve		Regulator		Flow rate adjusting valve				

AMD3¹₂²/AMD4¹₃²/AMD5¹₃² Series

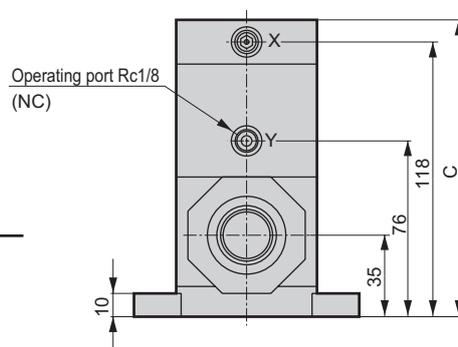
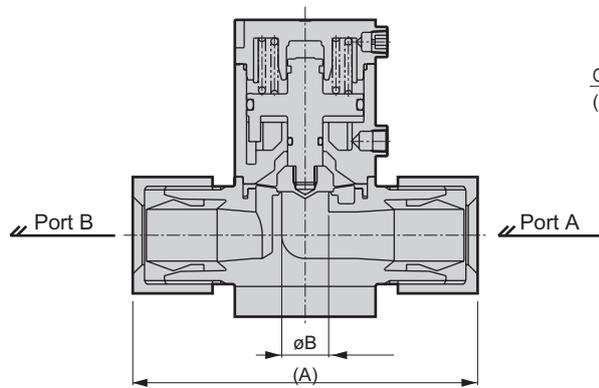
Dimensions

●ON/OFF only

· AMD5¹₃² 2- *1 -20



(Operating port direction)

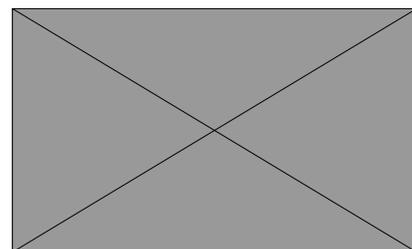
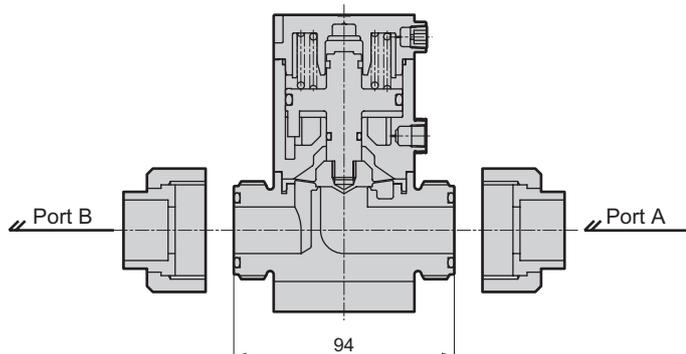


*1 (Connector No.)	A	B
25US	147	20
25BUS	147	20
25UP	146	20
25BUP	146	20
25BUA	140	20
25UR	159	20
25BUR	162	20
25UK	141	20
25BUK	141	20
25BUW	156	20

Fluid code	C
Blank/M	128
P	132

●PVC union fitting integrated

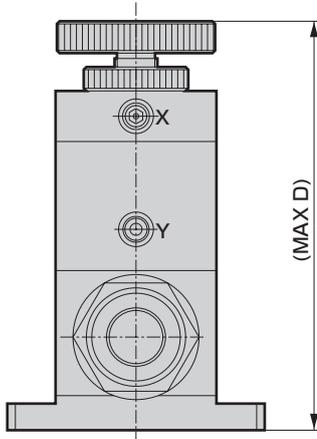
●Bottom mounting



Dimensions

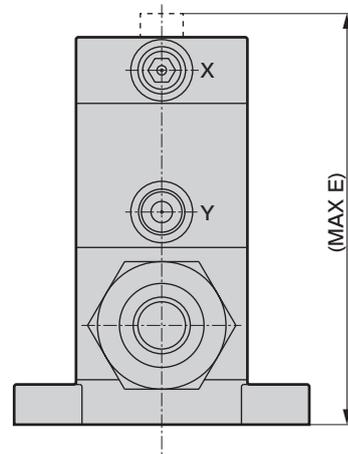
●With flow rate adjustment

· AMD¹₃² 2-*-20-1



●With indicator

· AMD¹₃² 2-*-20-6/7

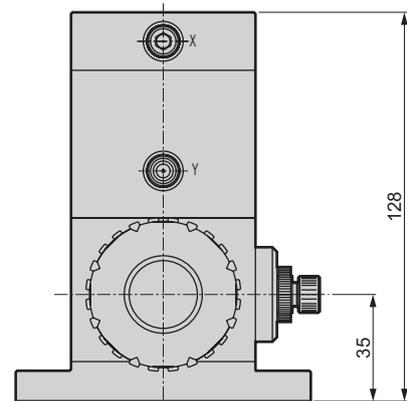
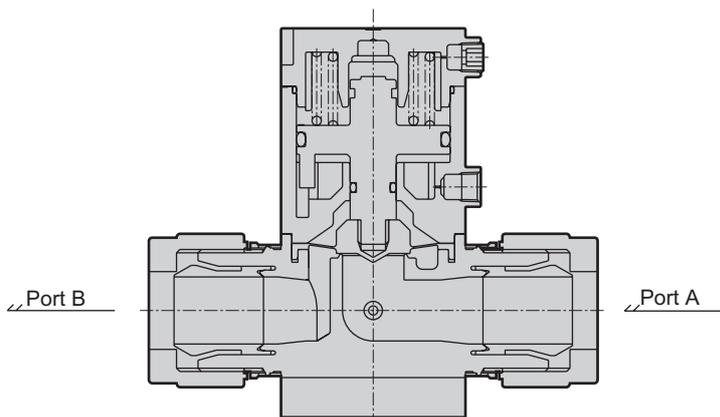
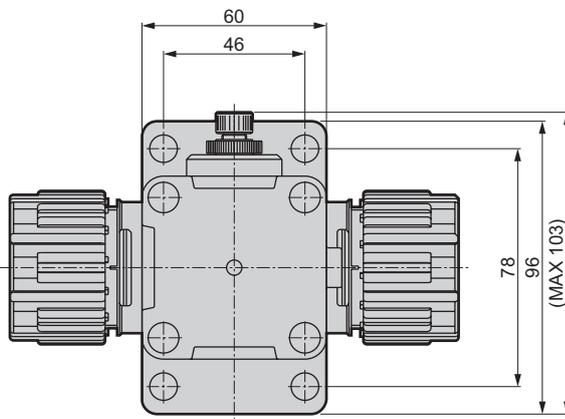


Fluid code	D	E
Blank/M	159	133
P	166	137

The dimensions are the same with bypass.

●With bypass

· AMD¹₃² 2-*-20-2/7



Air operated valve	Part3R	High pressure	Part3RR	High pressure
	Part2	Metals-free	Part2	Metals-free
	Part1	Large bore size	Part1	Large bore size
Manual valve		Polyvinyl chloride		Polyvinyl chloride
		Drainage		Drainage
		Manual valve		Manual valve
Drip prevention valve		Single unit		Single unit
		Air operated integrated		Air operated integrated
		Regulator		Regulator
Flow rate adjusting valve		Manual		Manual
		Electric		Electric
		Manual flow rate		Manual flow rate
Related products		Fine level Switch		Fine level Switch



Stainless steel body air operated valve for chemical liquids

AMD3¹/₂²/AMD4¹/₂²/AMD5¹/₂² Series



Specifications

Item	AMD3 ¹ / ₂ ² -8/3BT/6S	AMD3 ¹ / ₂ ² -10/4BT/8S
Working fluid	Chemical liquids, pure water, air, N2 gas (*1)	
Fluid temperature °C	5 to 120	
Proof pressure MPa	1.0	
Working pressure (A→B) MPa	0 to 0.3 (*2...High pressure specification)	
Working pressure (B→A) MPa	0 to 0.1 (*2:High pressure specification)	
Valve seat leakage cm ³ /min	0 (water pressure)	
Back pressure MPa	0 to 0.1 (*2:High pressure specification)	
Ambient temperature °C	0 to 60	
Frequency	30 cycles/min. or less	
Mounting orientation	Unrestricted	
Connection	Rc1/4 3/8" SUS tube Double barbed fitting for 3/8" (*3)	Rc3/8 1/2" SUS tube Double barbed fitting for 1/2" (*3)
Orifice size	ø8	ø10
Operating section	Operating pressure MPa	NC/NO 0.3 to 0.5, double acting 0.3 to 0.4
	Operating port	Rc1/8
Weight kg	0.45	

Item	AMD4 ¹ / ₂ ² -15/6BT/12S	AMD5 ¹ / ₂ ² -8BT/16S
Working fluid	Chemical liquids, pure water, air, N2 gas (*1)	
Fluid temperature °C	5 to 120	
Proof pressure MPa	1.0	
Working pressure (A→B) MPa	0 to 0.3 (*2...High pressure specification)	
Working pressure (B→A) MPa	0 to 0.1 (*2:High pressure specification)	
Valve seat leakage cm ³ /min	0 (water pressure)	
Back pressure MPa	0 to 0.1 (*2:High pressure specification)	
Ambient temperature °C	0 to 60	
Frequency	20 cycle/min. or less	
Mounting orientation	Unrestricted	
Connection	Rc 1/2, 3/4" SUS tube / Double barbed fitting for 3/4" (*3)	1" SUS tubing Double barbed fitting for 1" (*3)
Orifice size	ø16	ø20
Operating section	Operating pressure MPa	NC/NO 0.3 to 0.5, double acting 0.3 to 0.4
	Operating port	Rc1/8
Weight kg	0.89	

*1: Check the compatibility of product structural materials, working fluids and atmosphere.

*2: Refer to page 64 for high-pressure specifications.

*3: For double barbed fitting, fluorine lubricant is applied to the sliding surface between the front ferrule and fitting body.

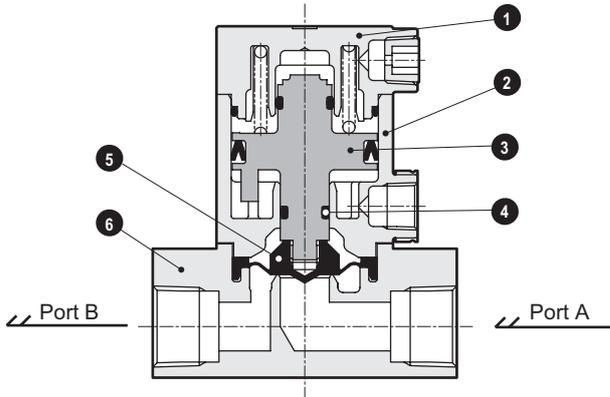
Always read the precautions on Intro Pages 7 to 14 before use.

AMD3¹₂²/AMD4¹₃²/AMD5¹₃² Series

Internal structure and parts list

Internal structure and parts list

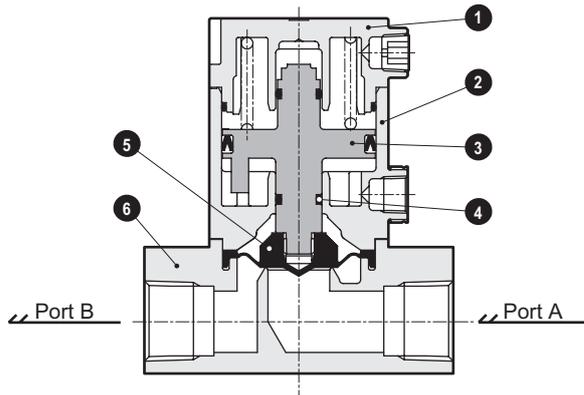
●AMD3*2 Series



Part No.	Part name	Material (by actuator material)	
		Standard	A
1	Cover	PPS	A5056
2	Cylinder	PPS	A5056
3	Piston rod	PPS	A5056
4	O-ring	EPDM	
5	Diaphragm	PTFE	
6	Body	SUS316L	

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

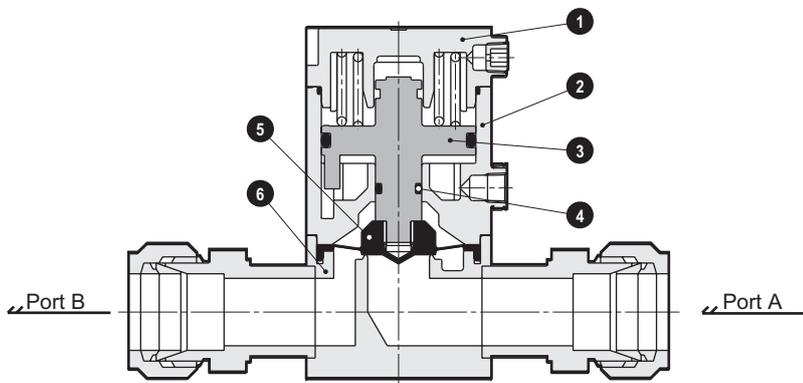
●AMD4*2 Series



Part No.	Part name	Material (by actuator material)	
		Standard	A
1	Cover	PPS	A5056
2	Cylinder	PPS	A5056
3	Piston rod	PPS	A5056
4	O-ring	EPDM	
5	Diaphragm	PTFE	
6	Body	SUS316L	

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

●AMD5*2 Series



Part No.	Part name	Material (by actuator material)	
		Standard	A
1	Cover	PPS	A5056
2	Cylinder	PPS	A5056
3	Piston rod	PPS	A5056
4	O-ring	EPDM	
5	Diaphragm	PTFE	
6	Body	SUS316L	

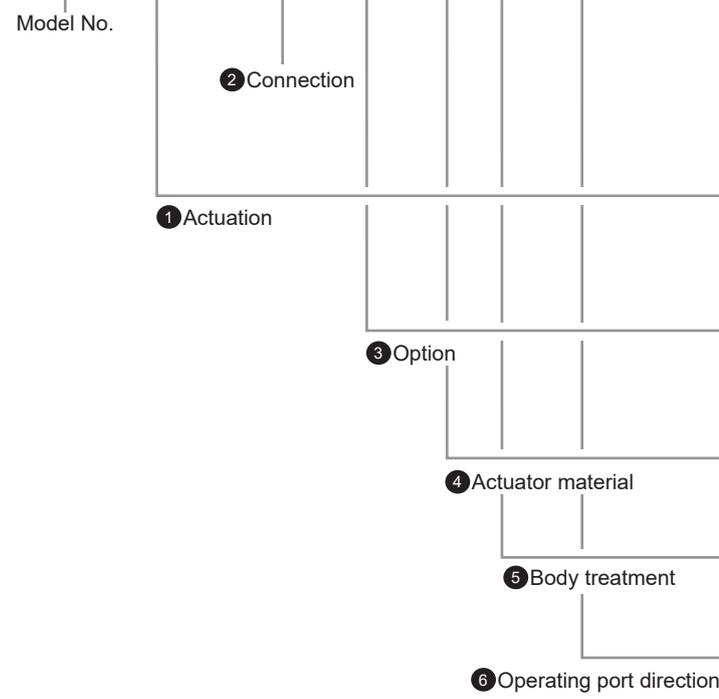
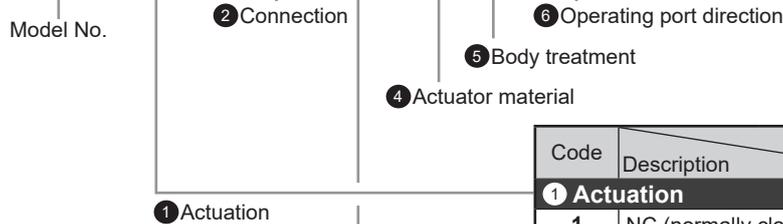
The material and structure may vary depending on the model number. Contact CKD for details.

Air operated valve	Part3R	High pressure	Metal-free	Large bore size	Polyvinyl chloride	Drainage
	Part2					
	Part1					
	Part3RR					
	Part2					
	Part1					
Manual valve	Part3RR	High pressure	Metal-free	Large bore size	Single unit	Air operated integrated
	Part2					
	Part1					
	Part3RR					
	Part2					
	Part1					
Regulator	Part3RR	Flow rate adjusting valve	Manual	Manual	Manual	Flow rate
	Part2					
	Part1					
	Part3RR					
	Part2					
	Part1					
Flow rate adjusting valve	Part3RR	Flow rate adjusting valve	Manual	Manual	Manual	Flow rate
	Part2					
	Part1					
	Part3RR					
	Part2					
	Part1					
Flow rate adjusting valve	Part3RR	Flow rate adjusting valve	Manual	Manual	Manual	Flow rate
	Part2					
	Part1					
	Part3RR					
	Part2					
	Part1					
Flow rate adjusting valve	Part3RR	Flow rate adjusting valve	Manual	Manual	Manual	Flow rate
	Part2					
	Part1					
	Part3RR					
	Part2					
	Part1					

AMD3¹₃²2/AMD4¹₃²2/AMD5¹₃²2 Series

How to order

- Part 3R
- Part 2
- Part 1
- High pressure
- Metal-free
- Large bore size
- PVC
- Drainage
- Part 3RN
- Part 2
- High pressure
- Metal-free
- Large bore size
- Single unit
- Air operated Integrated
- Pilot
- Manual
- Electric
- Manual
- Manual Fine flow rate
- Fine level Switch
- Related products



⚠️ Precautions for model No. selection

* Consult with CKD for connections other than the ones listed.
 * Connection Rc is not compatible with electrolytic polishing specifications.

2 Connection

8	3BT	6S	10	4BT	8S
Rc 1/4	3/8" x11.0 SUS tube	3/8" tube connection Double barbed fitting	Rc3/8	1/2" x11.24 SUS tube	1/2" tube connection Double barbed fitting

Code	Description	Orifice size
		ø8
		ø10

1 Actuation

Code	Description	8	3BT	6S	10	4BT	8S
1	NC (normally closed)	●	●	●	●	●	●
2	NO (normally open)	●	●	●	●	●	●
3	Double acting	●	●	●	●	●	●

3 Option

Code	Description	8	3BT	6S	10	4BT	8S
0	ON/OFF only	●	●	●	●	●	●
1	With flow rate adjustment	●	●	●	●	●	●
6	With indicator	●	●	●	●	●	●

4 Actuator material

Code	Description	8	3BT	6S	10	4BT	8S
Blank	PPS	●	●	●	●	●	●
A	A5056	●	●	●	●	●	●

5 Body treatment

Code	Description	8	3BT	6S	10	4BT	8S
Blank	None	●	●	●	●	●	●
E	With electrolytic polishing	●	●	●	●	●	●

6 Operating port direction

Code	Description	8	3BT	6S	10	4BT	8S
4		●	●	●	●	●	●
1		●	●	●	●	●	●
2		●	●	●	●	●	●
3		●	●	●	●	●	●

* Body electropolished products must be manufactured on a case-by-case basis.

2 Connection

15	6BT	12S
Rc1/2	3/4" x11.24 SUS tube	3/4" tube connection Double barbed fitting

Code	Description	Orifice size
		ø16

1 Actuation

Code	Description	15	6BT	12S
1	NC (normally closed)	●	●	●
2	NO (normally open)	●	●	●
3	Double acting	●	●	●

3 Option

Code	Description	15	6BT	12S
0	ON/OFF only	●	●	●
1	With flow rate adjustment	●	●	●
6	With indicator	●	●	●

4 Actuator material

Code	Description	15	6BT	12S
Blank	PPS	●	●	●
A	A5056	●	●	●

5 Body treatment

Code	Description	15	6BT	12S
Blank	None	●	●	●
E	With electrolytic polishing	●	●	●

6 Operating port direction

Code	Description	15	6BT	12S
4		●	●	●
1		●	●	●
2		●	●	●
3		●	●	●

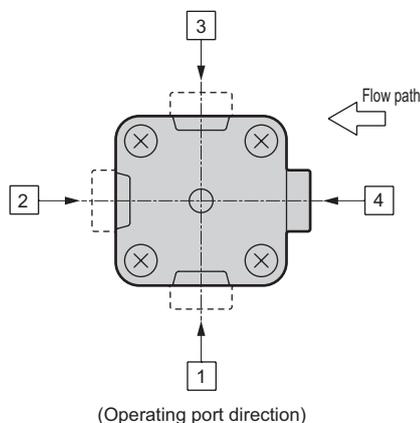
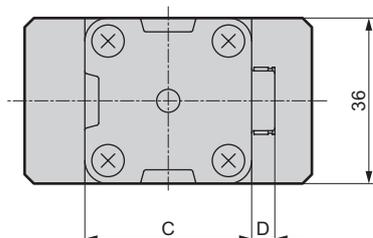
* Body electropolished products must be manufactured on a case-by-case basis.

AMD3¹₂²/AMD4¹₃²/AMD5¹₃² Series

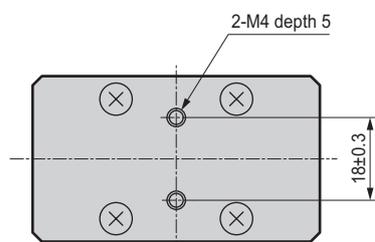
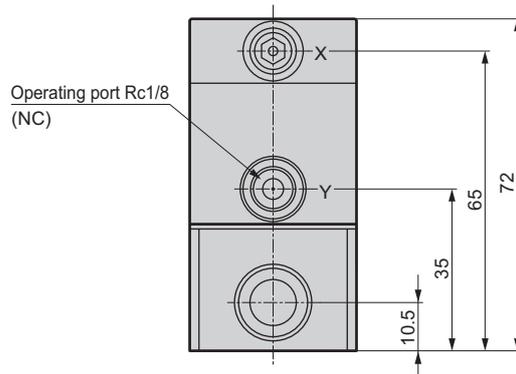
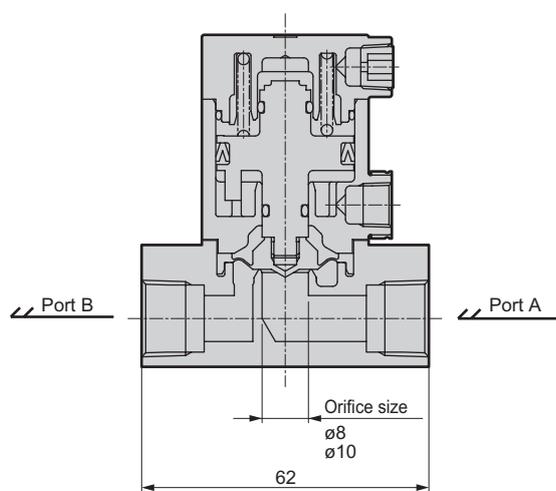
Dimensions

● Rc thread

· AMD3¹₂² 2-8/10



Actuator material	C	D
Blank	36	5
A	44	0

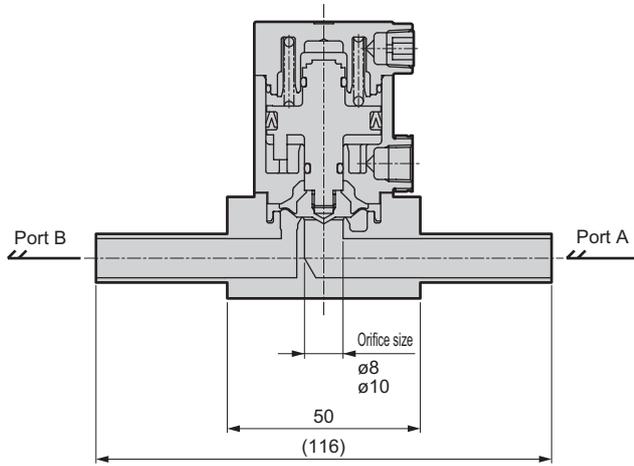


Part 3R	High pressure	Part 1	High pressure	Part 2	High pressure	Part 3RN	High pressure	Part 2	High pressure	Part 1	High pressure
	Metal-free		Metal-free		Metal-free		Metal-free		Metal-free		Metal-free
	Large bore size		Large bore size		Large bore size		Large bore size		Large bore size		Large bore size
	PVC		PVC		PVC		PVC		PVC		PVC
	Drainage		Drainage		Drainage		Drainage		Drainage		Drainage
	Air operated valve		Air operated valve		Air operated valve		Air operated valve		Air operated valve		Air operated valve
	Manual valve		Manual valve		Manual valve		Manual valve		Manual valve		Manual valve
	Single unit		Single unit		Single unit		Single unit		Single unit		Single unit
	Integrated		Integrated		Integrated		Integrated		Integrated		Integrated
	Pilot		Pilot		Pilot		Pilot		Pilot		Pilot
	Manual		Manual		Manual		Manual		Manual		Manual
	Electric		Electric		Electric		Electric		Electric		Electric
	Manual		Manual		Manual		Manual		Manual		Manual
	Fine		Fine		Fine		Fine		Fine		Fine
	Flow rate		Flow rate		Flow rate		Flow rate		Flow rate		Flow rate
	Switch		Switch		Switch		Switch		Switch		Switch
	Related products		Related products		Related products		Related products		Related products		Related products

Dimensions

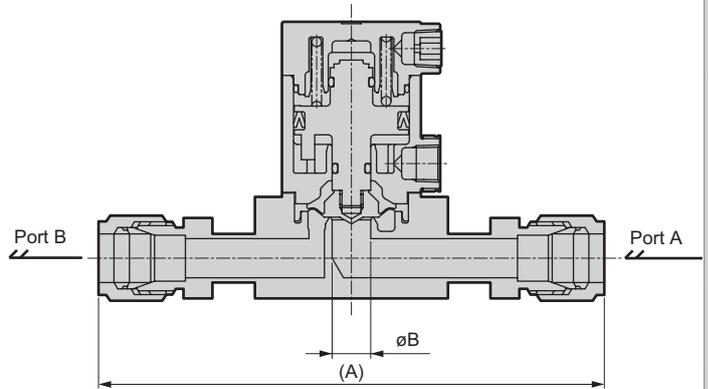
●SUS tube

- AMD3¹₃² 2-3BT/4BT



●Double barbed fitting

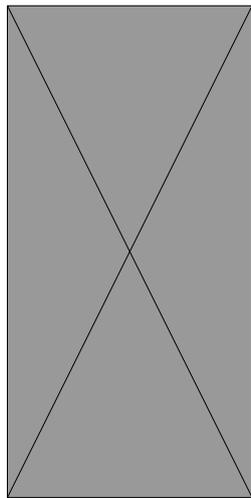
- AMD3¹₃² 2-6S/8S



Dimensions	A	B
Model No.		
AMD3*2-6S	116	8
AMD3*2-8S	130	10

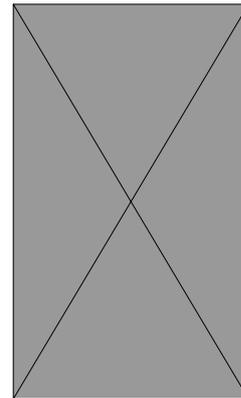
●With flow rate adjustment

- AMD3¹₃² 2-*-1



●With indicator

- AMD3¹₃² 2-*-6



Actuator material	E
Blank	75
A	74

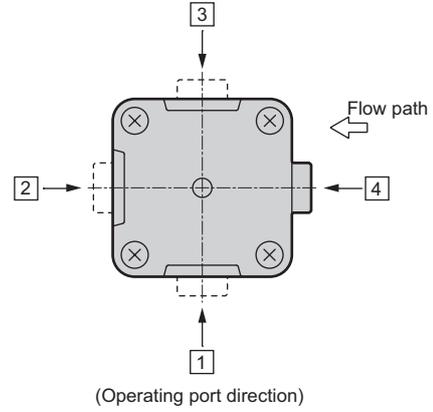
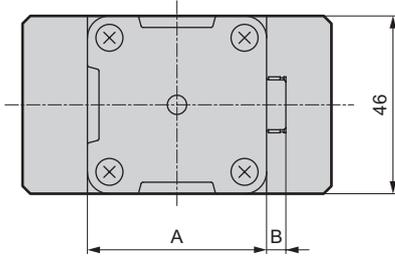
Air operated valve	Part3R	High pressure	Part2	High pressure	Part1	High pressure
		Metal-free		Large bore size		Large bore size
		Large bore size		Polyvinyl chloride		Polyvinyl chloride
Manual valve	Part3RN	High pressure	Part2	High pressure	Part1	High pressure
		Manual valve		Manual valve		Manual valve
		Manual valve		Manual valve		Manual valve
Drip prevention valve		Single unit		Single unit		Single unit
		Air operated		Air operated		Air operated
		Integrated		Integrated		Integrated
Regulator		Pilot		Pilot		Pilot
		Manual		Manual		Manual
		Manual		Manual		Manual
Flow rate adjusting valve		Electric		Electric		Electric
		Manual		Manual		Manual
		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	

AMD3¹₂²/₃ / AMD4¹₂²/₃ / AMD5¹₂²/₃ Series

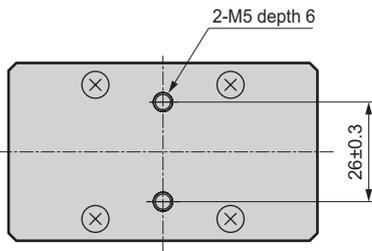
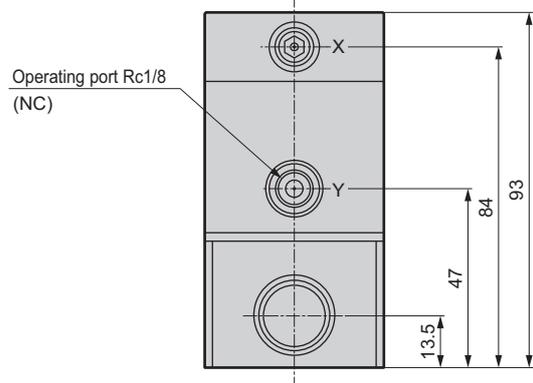
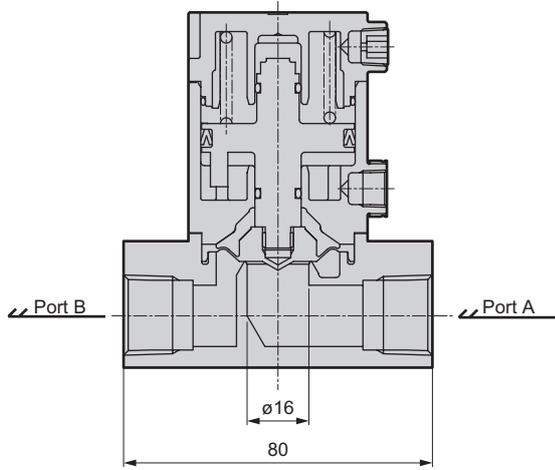
Dimensions

● Rc thread

· AMD4¹₂²/₃ 2-15



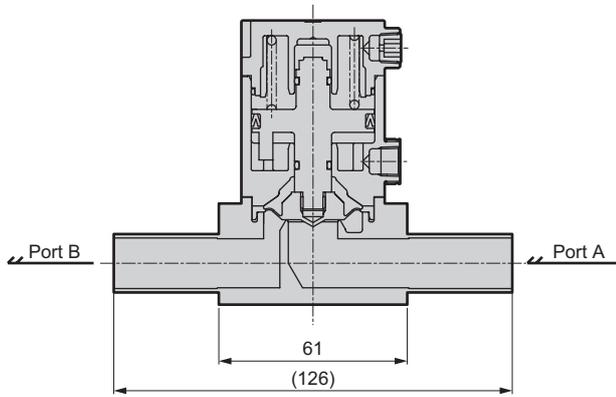
Actuator material	A	B
Blank	46	5
A	56	0



Dimensions

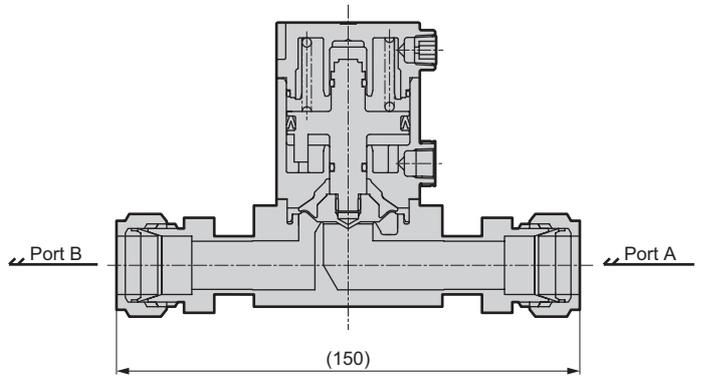
● SUS tube

· AMD¹₃²2-6BT



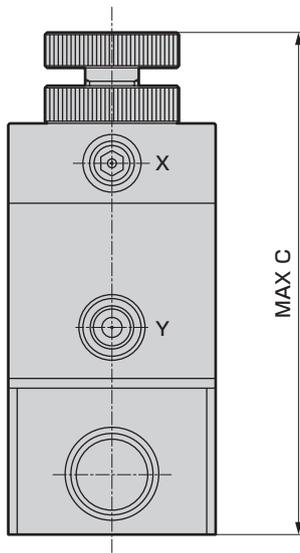
● Double barbed fitting

· AMD¹₃²2-12S



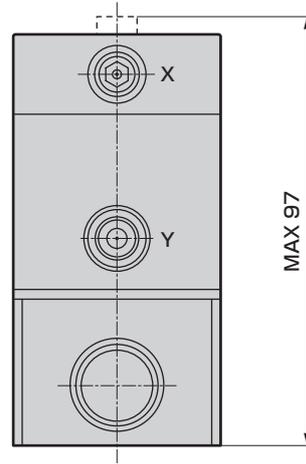
● With flow rate adjustment

· AMD¹₃²2-*-1



● With indicator

· AMD¹₃²2-*-6



Actuator material	C
Blank	117
A	119

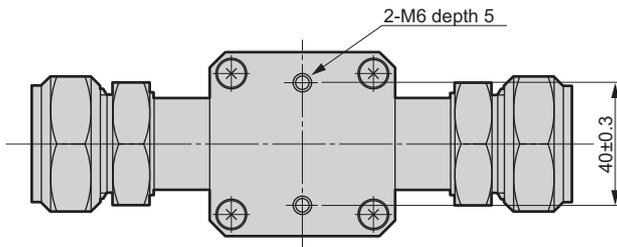
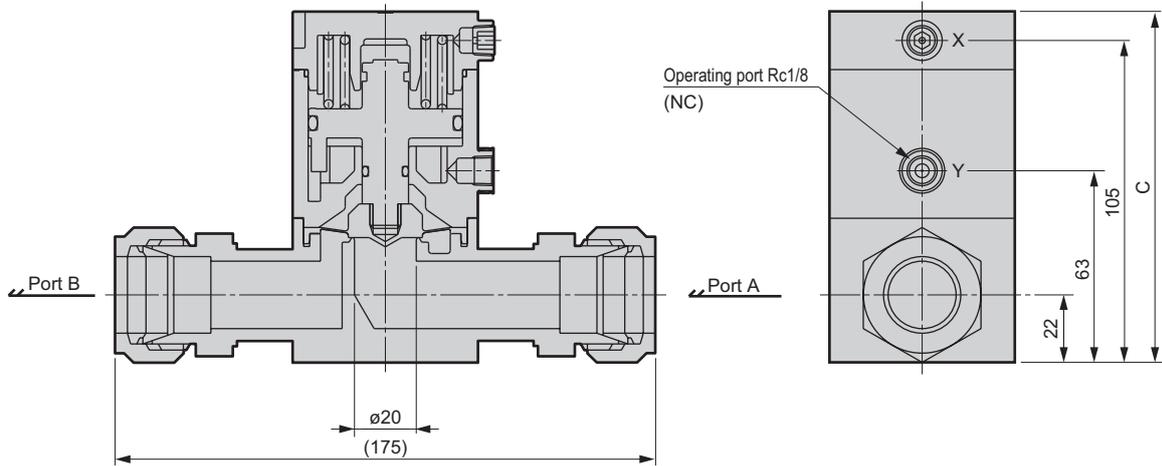
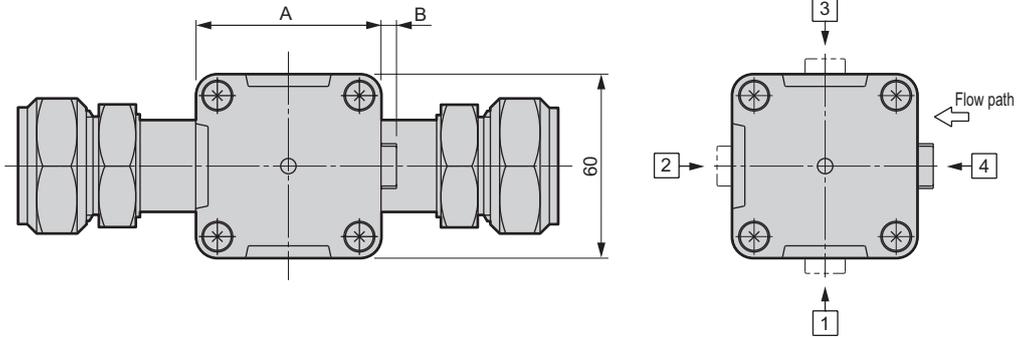
Air operated valve	Part3R	Part2	Part1
	High pressure	Metals-free	Large bore size
	Polyvinyl chloride	Drainage	Part3RN
Manual valve	High pressure	Metals-free	Large bore size
	Single unit	Air operated integrated	Pilot
	Regulator	Manual	Electric
Flow rate adjusting valve	Manual	Manual	Manual
	Manual Fine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

AMD3¹₂²/AMD4¹₃²/AMD5¹₃² Series

Dimensions

● Double barbed fitting

· AMD5¹₃² 2-16S

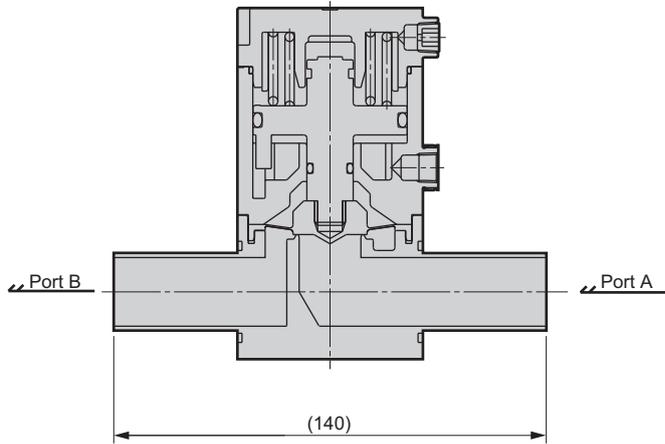


Actuator material	A	B	C
Blank	60	5	115
A	70	0	114

Dimensions

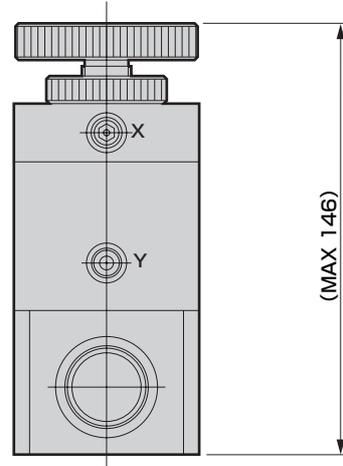
●SUS tube

· AMD5¹₂² 2-8BT



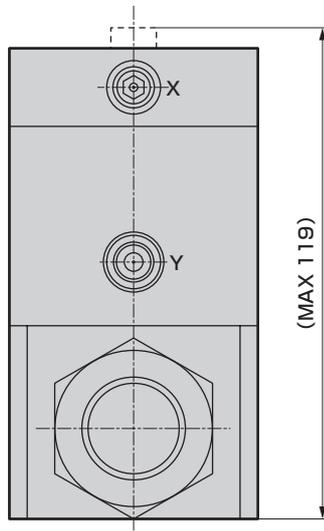
●With flow rate adjustment

· AMD5¹₂² 2-*-1



●With indicator

· AMD5¹₂² 2-*-6

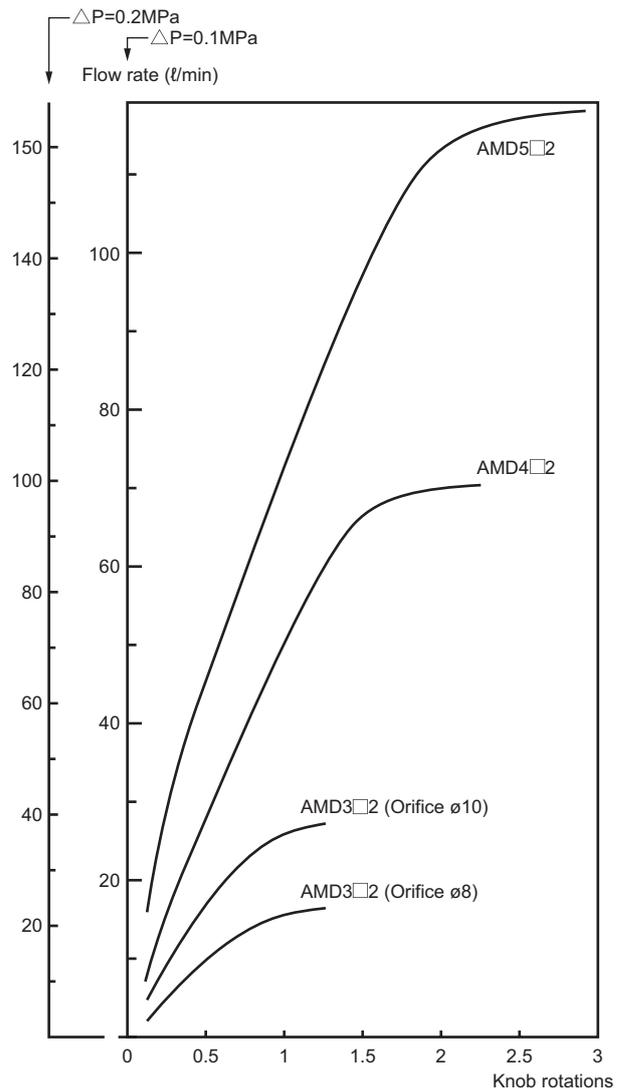
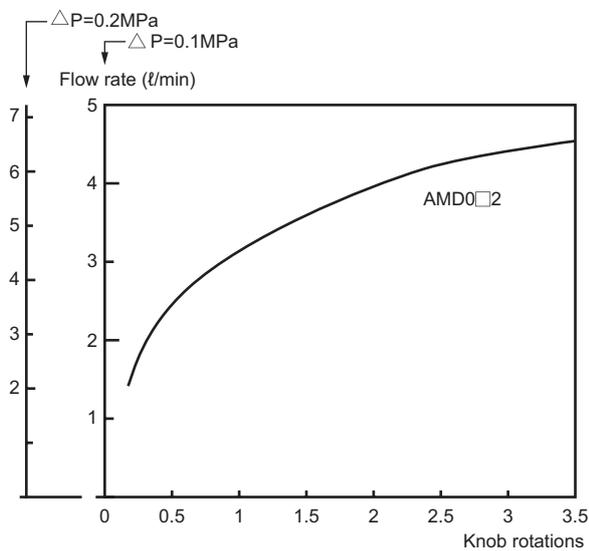


Part3R	Part2	Part1	High pressure	Metals-free	Large bore size	Polyvinyl chloride	Drainage	Part3RR	Part2	High pressure	Metals-free	Large bore size	Single unit	Air operated Integrated	Pilot	Manual	Electric	Manual	Manual Fine flow rate	Fine level Switch	Related products
			Air operated valve							Manual valve			Drip prevention valve		Regulator		Flow rate adjusting valve				

Flow characteristics

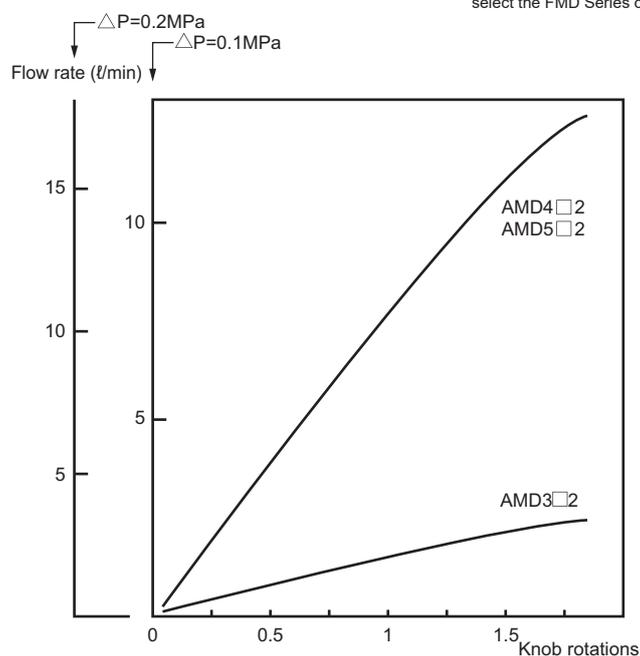
AMD0□2 to AMD5□2

- 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).

- With bypass (water)
Rotations - flow rate



Part3R	Part2	Part1	High pressure	Metals-free	Large bore size	Polyvinyl chloride	Drainage	Part3RR	Part2	High pressure	Metals-free	Large bore size	Single unit	Air operated	Pilot	Manual	Electric	Manual	Manual/Fine flow rate	Fine level Switch	Related products
			Air operated valve						Manual valve				Integrated		Regulator		Flow rate adjusting valve				