



General Purpose Valves
Catalog No. CB-03-1SA

Direct acting 2-port solenoid valve for dry air
(general purpose valve)

AB31/AB41-Z Series

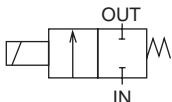
● NC (Open when energized)

● Port size: Rc1/8 to Rc1/2



JIS symbol

● NC (open when energized)



Common specifications

Item	Standard specifications
Working fluid	Dry air (atmospheric dew point -70°C and over)/inert gas/low vacuum [$1.33 \times 10^2 \text{ Pa (abs)}$]
Working pressure differential MPa	0 to 4 (refer to max. working pressure differential in individual specifications.)
Max. working pressure MPa	5
Proof pressure (water pressure) MPa	25
Fluid temperature °C	-10 to 45 (no freezing)
Ambient temperature °C	-10 to 45
Thermal class	Class 130 (B)
Atmosphere	Place free of corrosive gas and explosive gas
Valve structure	Direct acting poppet structure
Valve seat leakage cm^3/min (ANR)	0.2 or less
Mounting orientation	Unrestricted

Individual specifications

Item Model No.	Port size	Orifice size (mm)	Max. working pressure differential (MPa)	Rated voltage	Power consumption (W)		Weight (kg)
					AC	DC	
AB31- ⁰¹ ₀₂ -1-*****Z	Rc 1/8 Rc 1/4	1.5	2.5	100 VAC 50/60Hz 200 VAC 50/60Hz	17	14	0.45
-2-*****Z		2.0	1.5				
-3-*****Z		3.0	0.5				
-4-*****Z		3.5	0.35				
-5-*****Z		4.0	0.2				
-6-*****Z		5.0	0.12				
AB41- ⁰² ₀₃ -1-*****Z	Rc 1/4 Rc 3/8	1.5	4.0	12 VDC 24 VDC 48 VDC 100 VDC	17	14	0.57 (Rc1/4)
-2-*****Z		2.0	2.5				
-3-*****Z		3.0	0.9				
-4-*****Z		3.5	0.6				0.59 (Rc3/8)
-5-*****Z		4.0	0.4				
-6-*****Z		5.0	0.2				
-7-*****Z		7.0	0.1				
AB41- ⁰³ ₀₄ -8-*****Z	Rc3/8 / Rc1/2	10.0	0.03				0.68

*1: The model numbers above show the basic port size (Rc). Refer to How to order for other combinations.

*2: The port size model No. is 01 for Rc1/8 (6A), 02 for Rc1/4 (8A), 03 for Rc3/8 (10A) and 04 for Rc1/2 (15A).

*3: The voltage fluctuation range must be within $\pm 10\%$ of the rated voltage.

*4: The leakage current must be less than or equal to the values shown below.

*5: When using at low vacuum, vacuum the OUT port side.

Leakage current	Voltage	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
	Model No.						
	AB31-*_*-*****Z	10 mA or less	5 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less
	AB41-*_*-*****Z	10 mA or less	5 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less

Compatibility table by variation

	AB3/AB4-Z
Classification	Direct acting 2-port valve for dry air
Body material	Stainless steel
P4	●
P40	●

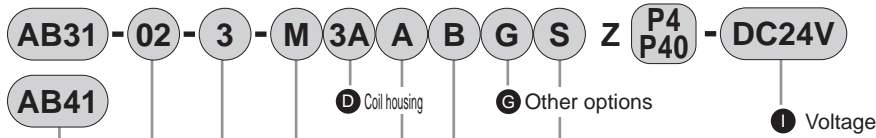
●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

*1: Body material Select from stainless steel products.

*2: Body material/Seal combination code M only.

*3: Pipe material is SUS316.

How to order





						Model No.		
						AB31	AB41	AB41 Large flow rate
Code	Item	Code	Item	Code	Item			
A Port size								
01	Rc 1/8	1G	G 1/8	1N	1/8NPT	●	●	●
02	Rc 1/4	2G	G 1/4	2N	1/4NPT	●	●	●
03	Rc 3/8	3G	G 3/8	3N	3/8NPT	●	●	●
04	Rc 1/2	4G	G 1/2	4N	1/2NPT	●	●	●
B Orifice size								
1	ø1.5					●	●	●
2	ø2					●	●	●
3	ø3					●	●	●
4	ø3.5					●	●	●
5	ø4					●	●	●
6	ø5					●	●	●
7	ø7					●	●	●
8	ø10					●	●	●
C Body/sealant combination								
	Body	Seal	Treatment	Remarks				
M	Stainless steel	Fluoro rubber	Oil-prohibited	—	●	●	●	●


The combinations indicated with ● in the above table are available.

For Items ④ to ⑨, the combinations indicated with codes are available. Note that if options for Items ⑤ to ⑧ are not required, they should be left blank.

D Coil housing			E	F	G Other options		H	I Rated voltage
Description			Manual override (Locking)	Mounting plate	Conduit		With surge suppressor	Description
					(conduit piping)			
					CTC-19	G1/2		
3A	Open Frame type	Lead wire	A	B	G	H	S	12 VDC, 24 VDC, 48 VDC, 100 VDC
3I		HP terminal box (IP65 or equivalent) (G1/2)						
3J		HP terminal box with lamp (IP65 or equivalent) (G1/2)						
5A	Open Frame type (diode integrated)	Lead wire	A	B	G	H		100 VAC, 200 VAC
5I		HP terminal box (IP65 or equivalent) (G1/2)						
5J		HP terminal box with lamp (IP65 or equivalent) (G1/2)						

Refer to the following cautions for Items ④ to ⑨.

3A 5A		<ul style="list-style-type: none"> ● Open frame Grommet lead wire 300 mm ● 5A (diode integrated)
3I 3J 5I 5J		<ul style="list-style-type: none"> ● Open frame HP terminal box (IP65 or equivalent) ● 5I, 5J (diode integrated)

G H		<ul style="list-style-type: none"> ● Conduit ● G(CTC19) ● H(G1/2)
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Refer to "General Purpose Valves" (catalog No. CB-03-1SA) for details on coil selection.

Precautions for model No. selection

Notes for Item ④

*1: Coils for 5A, 5I, and 5J convert AC voltage to DC with a diode. Voltage of less than 100 VAC is not available.

Notes for Items ⑤ to ⑧

*2: The manual override (Item ⑤ A) is not available for the low pressure large flow rate AB41-03, 04-8.

*3: For ⑥, select an option from G and H.

*4: The surge suppressor is attached with the lead wire coil. When selecting a coil with terminal box, the surge suppressor is mounted in the terminal box.

*5: Surge suppressor is incorporated as standard in the coil with diode.

Notes for Item ⑨

*6: 100 VAC coil is compatible with 100 VAC 50/60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz.

*7: Contact CKD for voltages other than above.

*8: The lead wire is available in the standard 300mm length, as well as 500mm, 1000mm, 2000mm and 3000mm lengths. Contact CKD for more information.

Direct acting 2-port solenoid valve for dry air, manifold/actuator
(general purpose valve)

GAB312/GAB352/GAB412/GAB452-Z Series

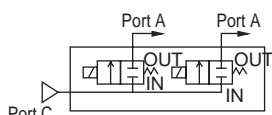
- NC (Open when energized)
- Common supply (port C pressurization), Individual supply (Port A pressurization)

RoHS

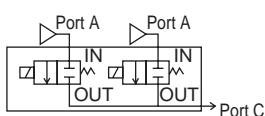


JIS symbol

- GAB312/412-Z
(Common supply/port C pressurization)



- GAB352/452-Z
(Individual supply/port A pressurization)



Common specifications

Item	Standard specifications
Working fluid	Dry air (atmospheric dew point -70°C and over)/inert gas/low vacuum [$1.33 \times 10^2 \text{ Pa (abs)}$]
Working pressure differential MPa	0 to 4 (refer to max. working pressure differential in individual specifications.)
Max. working pressure MPa	5
Proof pressure (water pressure) MPa	10
Fluid temperature °C	-10 to 45 (no freezing)
Ambient temperature °C	-10 to 45
Thermal class	Class 130 (B)
Atmosphere	Place free of corrosive gas and explosive gas
Valve structure	Direct acting poppet structure
Valve seat leakage cm^3/min (ANR)	0.2 or less
Mounting orientation	Unrestricted

Individual specifications

Item	Port size	Orifice size (mm)	Max. working pressure differential (MPa)	Rated voltage	Power consumption (W)		
Model No.					5 VAC 0/60Hz	DC	
GAB312/352-1-Z	—	1.5	2.5	100 VAC 50/60Hz	17	14	
-2-Z		2.0	1.5				
-3-Z		3.0	0.5				
-4-Z		3.5	0.35				
-5-Z		4.0	0.2				
-6-Z		5.0	0.12				
GAB412/452-1-Z	—	1.5	4.0	200 VAC 50/60Hz			
-2-Z		2.0	2.5				12 VDC 24 VDC 48 VDC 100 VDC
-3-Z		3.0	0.9				
-4-Z		3.5	0.6				
-5-Z		4.0	0.4				
-6-Z		5.0	0.2				
-7-Z		7.0	0.1				

*1: The model numbers above are for basic orifice sizes. Refer to How to order for other combinations.

*2: Refer to How to order and Dimensions in "General Purpose Valves" (catalog No.CB-03-1SA) for port size.

*3: The voltage fluctuation range must be within $\pm 10\%$ of the rated voltage.

*4: The leakage current must be less than or equal to the values shown below.

*5: When using at low vacuum, vacuum the OUT port side.

Leakage current	Voltage	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
	Model No.						
	GAB312/352*-*.*****Z	10 mA or less	5 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less
	GAB412/452*-*.*****Z	10 mA or less	5 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less

Compatibility table by variation

	GAB3/GAB4-Z
Classification	Direct acting 2-port valve for dry air
Body material	Stainless steel
P4	●
P40	●

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

*1: Body material Select from stainless steel products.

*2: Body material/Seal combination code M only.

*3: Pipe material is SUS316.

How to order

● Common supply (port C pressurization)

● Individual supply (port A pressurization)

● Common supply (port C pressurization)

● Individual supply (port A pressurization)

GAB312 - 1 - 5 - M 5A A G S Z P4 P40 - AC100V

GAB352

GAB412

GAB452

Model No.

D Coil housing G With surge suppressor
E Manual override (locking) H Rated voltage
F Other options

A Orifice size

B Manifold station No.

*2

C Body/sealant combination

Model No.

GAB312 GAB352
GAB412 GAB452


Code	Item					
A Orifice size						
1	ø1.5		●	●		
2	ø2		●	●		
3	ø3		●	●		
4	ø3.5		●	●		
5	ø4		●	●		
6	ø5		●	●		
7	ø7			●		
B Manifold station No.						
2	2 stations					
to	to		●	●		
10	10 stations					
0	Actuator only		●	●		
C Body/sealant combination						
	Body	Seal	Treatment	Remarks		
M	Stainless steel	Fluoro rubber	Oil-prohibited	—	●	●


The combinations indicated with ● in the above table are available.


For Items (D) to (H), the combinations indicated with codes are available. Note that if options for Items (E) to (G) are not required, they should be left blank.

D Coil housing			E	F Other options		G	H Rated voltage
Description			Manual override (Locking)	Conduit		With surge suppressor	Description
				(conduit piping)			
				CTC-19	G1/2		
3 A	Open Frame type	Lead wire	A	G	H	S	12 VDC, 24 VDC, 48 VDC, 100 VDC
3 I		HP terminal box (IP65 or equivalent) (G1/2)					12 VDC, 24 VDC, 100 VDC
3 J		HP terminal box with lamp (IP65 or equivalent) (G1/2)					
5 A	Open Frame type	Lead wire	A	G	H		100 VAC, 200 VAC
5 I		HP terminal box (IP65 or equivalent) (G1/2)					
5 J		HP terminal box with lamp (IP65 or equivalent) (G1/2)					

▲ Refer to the following cautions for Items (D) to (H).

3A 5A		<ul style="list-style-type: none"> Open frame Grommet lead wire 300 mm 5A (diode integrated)
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3I 3J 5I 5J		<ul style="list-style-type: none"> Open frame HP terminal box (IP65 or equivalent) 5I, 5J (diode integrated)
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G H		<ul style="list-style-type: none"> Conduit G(CTC19) H(G1/2)
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Refer to "General Purpose Valves" (catalog No. CB-03-1SA) for details on coil selection.

⚠ Precautions for model No. selection

*1: Orders for only the masking plate and sub-plate are also available. Contact CKD for details.

Notes for Item (B)

*2: For 11 or more manifold station No., contact CKD.

Notes for Item (D)

*3: Coils for 5A, 5I, and 5J convert AC voltage to DC with a diode.

Notes for Items (F) to (G)

*4: For Item (F), select an option from G and H.

*5: The surge suppressor is attached with the lead wire coil. When selecting a coil with terminal box, the surge suppressor is mounted in the terminal box.

*6: Surge suppressor is incorporated as standard for coil with diode.

Notes for Item (H)

*7: The 100 VAC coil can be used at 100 VAC 50/60Hz and the 200 VAC coil can be used at 200 VAC 50/60Hz.

*8: For voltages other than above, contact CKD.

*9: The lead wire is available in the standard 300mm length, as well as 500mm, 1000mm, 2000mm and 3000mm lengths. Contact CKD for more information.



General Purpose Valves
Catalog No. CB-03-1SA

Direct acting 3-port solenoid valve for dry air
(general purpose valve)

AG3*/AG4*- Z Series

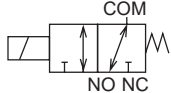
- Universal, NC pressurization, NO pressurization
- Port size: Rc1/8, Rc1/4, Rc3/8



JIS symbol

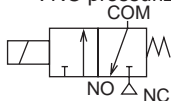
● AG31/41-Z

: Universal



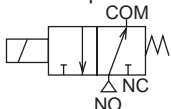
● AG33/43-Z

: NC pressurization



● AG34/44-Z

: NO pressurization



Common specifications

Item	Standard specifications
Working fluid	Dry air (Atmospheric dew point-70°C or more)/inert gas/low vacuum [1.33×10^2 PA(abs)]
Working pressure differential MPa	0 to 1 (Refer to max. working pressure differential in individual specifications.)
Proof pressure (water pressure) MPa	25
Fluid temperature °C	-10 to 45 (no freezing)
Ambient temperature °C	-10 to 45
Thermal class	Class 130 (B)
Atmosphere	Place free of corrosive gas and explosive gas
Valve structure	Direct acting poppet structure
Valve seat leakage cm ³ /min (ANR)	0.2 or less
Mounting orientation	Unrestricted

Individual specifications

Item	Port size	Orifice size (mm)		Max. working pressure differential (MPa)	Max. working pressure MPa	Rated voltage	Power consumption (W)		Weight (kg)					
Model No.		TOP	BODY				AC	DC						
Universal														
AG31- <div>0102</div> -1-*****Z	Rc 1/8	1.5	1.5	0.7	1	100 VAC 50/60Hz	17	14	0.45					
-2-*****Z	Rc 1/4	2.0	2.0	0.4										
AG41- <div>0203</div> -1-*****Z	Rc 1/4	2.0	2.0	0.65										
-2-*****Z	Rc 3/8	2.3	2.3	0.4										
NC pressurization														
AG33- <div>0102</div> -1-*****Z	Rc 1/8	1.5	1.5	1.0	1	200 VAC 50/60Hz			17	14	0.45			
-2-*****Z	Rc 1/4	2.0	2.0	0.7										
AG43- <div>0203</div> -4-*****Z	Rc 1/4	3.0	3.0	0.7										
-5-*****Z	Rc 3/8	3.5	3.0	0.4										
NO pressurization														
AG34- <div>0102</div> -1-*****Z	Rc 1/8	1.5	1.5	1.0	1.5	12 VDC					17	14	0.45	
-2-*****Z	Rc 1/4	2.0	2.0	0.45		24 VDC								
AG44- <div>0203</div> -1-*****Z	Rc 1/4	2.0	2.0	0.75		48 VDC								
-3-*****Z		Rc 3/8	2.0	3.0		0.7								100 VDC
-4-*****Z			3.0	3.0		0.25								

*1: The model numbers above show the basic port size (Rc). Refer to How to order for other combinations.

*2: The port size symbol is 01 for Rc1/8 (6A), 02 for Rc1/4 (8A) and 03 for Rc3/8 (10A).

*3: The voltage fluctuation range must be within $\pm 10\%$ of the rated voltage.

*4: The leakage current must be less than or equal to the values shown below.

*5: When using at low vacuum, vacuum the NO port side of NC pressurization type or the NC port side of NO pressurization type.

Leakage current	Voltage	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
	Model No.						
	AG31/33/34-*.*****Z	6 mA or less	3 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less
	AG41/43/44-*.*****Z	8 mA or less	4 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less

Compatibility table by variation

	AG3/AG4-Z
Classification	Direct acting 3-port valve for dry air
Body material	Stainless steel
P4	●
P40	●

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

*1: Body material Select from stainless steel products.

*2: Body material/Seal combination code M only.

*3: Pipe material is SUS316.

How to order

● Universal

AG31 - 02 - 2 - M 3A A B G S Z P4 P40 - DC24V

AG41

● NC pressurization

AG33

AG43

● NO pressurization

AG34

AG44

Model No.

D Coil housing

G Other options

E Manual override (Locking)

F Mounting plate

H With surge suppressor

I Voltage

A Port size

B Orifice size

C Body/sealant combination



						Model No.					
Code	Item	Code	Item	Code	Item	AG31	AG41	AG33	AG43	AG34	AG44
A Port size											
01	Rc 1 / 8	1G	G 1 / 8	1 N	1 / 8NPT	●		●		●	
02	Rc 1 / 4	2G	G 1 / 4	2 N	1 / 4NPT	●	●	●	●	●	●
03	Rc 3 / 8	3G	G 3 / 8	3 N	3 / 8NPT		●		●		●
B Orifice size											
		AG31		AG41		AG33		AG43		AG34	
		TOP	BODY	TOP	BODY	TOP	BODY	TOP	BODY	TOP	BODY
1		ø1.5	ø1.5	ø2.0	ø2.0	ø1.5	ø1.5	-	-	ø1.5	ø1.5
2		ø2.0	ø2.0	ø2.3	ø2.3	ø2.0	ø2.0	-	-	ø2.0	ø2.0
3		-	-	-	-	-	-	-	-	ø2.0	ø3.0
4		-	-	-	-	-	-	ø3.0	ø3.0	-	-
5		-	-	-	-	-	-	ø3.5	ø3.0	-	-
C Body/sealant combination											
	Body	Seal		Treatment		Remarks					
M	Stainless steel	Fluoro rubber		Oil-prohibited		—		●	●	●	●


The combinations indicated with ● in the above table are available.

For Items ① to ⑩, the combinations indicated with codes are available. Note that if options for Items ⑤ to ⑨ are not required, they should be left blank.

D Coil housing			E	F	G Other options		H	I Rated voltage
Description			Manual override (Locking)	Mounting plate	Conduit		With surge suppressor	Description
					(conduit piping)			
					CTC-19	G 1 / 2		
3A	Open frame type	Lead wire	A	B	G	H	S	12 VDC, 24 VDC, 48 VDC, 100 VDC
3I		HP terminal box (IP65 or equivalent) (G1/2)						12 VDC, 24 VDC, 100 VDC
3J		HP terminal box with lamp (IP65 or equivalent) (G1/2)						
5A	Open frame type (diode integrated)	Lead wire	A	B	G	H		100 VAC, 200 VAC
5I		HP terminal box (IP65 or equivalent) (G1/2)						
5J		HP terminal box with lamp (IP65 or equivalent) (G1/2)						

▲ Refer to the following cautions for Items ① to ⑩.

3A 5A		<ul style="list-style-type: none"> ● Open frame Grommet lead wire 300 mm ● 5 A(diode integrated)
3I 3J 5I 5J		<ul style="list-style-type: none"> ● Open frame HP terminal box (IP65Phaseequivalent) ● 5I,5J(diode integrated)

G H		<ul style="list-style-type: none"> ● Conduit ● G(CTC19) ● H(G1/2)
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Refer to "General Purpose Valves" (catalog No. CB-03-1SA) for details on coil selection.

⚠ Precautions for model No. selection

Notes for Item ①

*1: Coils for 5A, 5I, and 5J convert AC voltage to DC with a diode. Voltage of less than 100 VAC is not available.

Notes for Items ⑤ to ⑨

*2: For ⑤, select an option from G and H.

*3: The surge suppressor is attached with the lead wire coil. When selecting a coil with a terminal box, the surge suppressor is mounted in the terminal box.

*4: Surge suppressor is incorporated as standard in the coil with diode.

Notes for Item ⑩

*5: 100 VAC coil is compatible with 100 VAC 50/60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz.

*6: Contact CKD for voltages other than above.

*7: The lead wire is available in the standard 300mm length, as well as 500mm, 1000mm, 2000mm and 3000mm lengths. Contact CKD for more information.

Direct acting 3-port solenoid valve for dry air, manifold/actuator
(general purpose valve)

GAG31*/GAG35*/GAG41*/GAG45* - Z Series

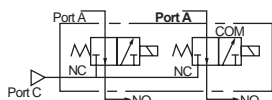
- Universal
- Common supply/individual exhaust, common supply/separate flow

RoHS

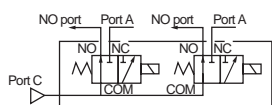
CAD

Manifold circuit configuration

- GAG31*/41*-Z
(Common supply/individual exhaust)



- GAG35*/45*-Z
(Common supply/separate flow)



Common specifications

Item	Standard specifications
Working fluid	Dry air (atmospheric dew point -70°C and over)/inert gas/low vacuum [1.33x10 ² Pa (abs)]
Working pressure differential MPa	0 to 1 (Refer to max. working pressure differential in individual specifications.)
Max. working pressure MPa	1
Proof pressure (Water pressure) MPa	10
Fluid temperature °C	-10 to 45 (no freezing)
Ambient temperature °C	-10 to 45
Thermal class	Class 130 (B)
Atmosphere	Place free of corrosive gas and explosive gas
Valve structure	Direct acting poppet structure
Valve seat leakage cm ³ /min (ANR)	0.2 or less
Mounting orientation	Unrestricted

Individual specifications

Item	NO port Port size	Orifice size (mm)		Max. working pressure differential (MPa)	Rated voltage	Power consumption (W)	
Model No.		TOP	BODY			AC50/60Hz	DC
GAG 311-1-Z	Rc1/8	1.5	1.5	0.7	100 VAC 50/60Hz	17	14
351-2-Z		2.0	2.0	0.4			
GAG 312-1-Z	Rc1/4	1.5	1.5	0.7	200 VAC 50/60Hz		
352-2-Z		2.0	2.0	0.4			
GAG 412-1-Z	Rc1/4	2.0	2.0	0.65	12 VDC 24 VDC 48 VDC 100 VDC		
452-2-Z		2.3	2.3	0.4			
GAG 413-1-Z	Rc3/8	2.0	2.0	0.65			
453-2-Z		2.3	2.3	0.4			

*1: The model numbers above are for the basic NO port size and orifice size. Refer to How to order for other combinations.

*2: Refer to How to order and Dimensions in "General Purpose Valves" (catalog No. CB-03-1SA) for port size of ports A and C.

*3: The voltage fluctuation range must be within ±10% of the rated voltage.

*4: When using in a continuously energized state, use fluoro rubber seal.

*5: The leakage current must be less than or equal to the values shown below.

Leakage current	Voltage	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
	Model No.						
	GAG31*-*****Z	6 mA or less	3 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less
	GAG41*-*****Z	8 mA or less	4 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less

Compatibility table by variation

	GAG3/GAG4-Z
Classification	Direct acting 3-port valve for dry air
Body material	Stainless steel
P4	●
P40	●

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

*1: Body material Select from stainless steel products.

*2: Body material/Seal combination code M only.

*3: Pipe material is SUS316.

How to order

● Common supply/individual exhaust (port C pressurization)

GAG31 **1** - **1** - **7** - **M** **5A** **A** **G** **S** **Z** **P4** **P40** - **AC100V**

● Common supply/separate flow (port C pressurization)

GAG35 **1**

● Common supply/individual exhaust (port C pressurization)

GAG41 **2**

● Common supply/separate flow (port C pressurization)

GAG45 **2**

Model No.

● A NO port size

● B Orifice size

● C Manifold station
*2 No.

● D Body/sealant combination

E

Coil housing

F

Manual override (locking)

G

Other options

H

With surge suppressor

I

Rated voltage

Model No.

GAG3**

GAG4**



Code	Item					
A NO port size						
1	1/8				●	
2	1/4				●	●
3	3/8					●
B Orifice size						
	GAG3**			GAG4**		
	TOP	BODY	TOP	BODY		
1	ø1.5	ø1.5	ø2.0	ø2.0	●	●
2	ø2.0	ø2.0	ø2.3	ø2.3	●	●
C Manifold station No.						
2	2 stations					
to	to				●	●
10	10 stations					
0	Actuator only				●	●
D Body/sealant combination						
	Body	Seal	Treatment	Remarks		
M	Stainless steel	Fluoro rubber	Oil-prohibited	—	●	●


The combinations indicated with ● in the above table are available.

For Items (E) to (I), the combinations indicated with codes are available. Note that if options for Items (F) to (H) are not required, they should be left blank.

E Coil housing			F	G Other options		H	I Rated voltage
Description			Manual override (Locking)	Conduit		With surge suppressor	Description
				(conduit piping)			
				CTC-19	G 1 / 2		
3A	Open Frame type	Lead wire	A	G	H	S	12 VDC, 24 VDC, 48 VDC, 100 VDC
3I		HP terminal box (IP65 or equivalent) (G1/2)					
3J		HP terminal box with lamp (IP65 or equivalent) (G1/2)					
5A	Open Frame type	Lead wire	A	G	H		100 VAC, 200 VAC
5I		HP terminal box (IP65 or equivalent) (G1/2)					
5J		HP terminal box with lamp (IP65 or equivalent) (G1/2)					

▲ Refer to the following cautions for Items (E) to (I).

3A 5A		<ul style="list-style-type: none"> ● Open frame ● Grommet lead wire 300 mm ● 5 A(diode integrated)
3I 3J 5I 5J		<ul style="list-style-type: none"> ● Open frame HP terminal box (IP65Phaseequivalent) ● 5I,5J(diode integrated)

G H		<ul style="list-style-type: none"> ● Conduit ● G(CTC19) ● H(G1/2)
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Refer to "General Purpose Valves" (catalog No. CB-03-1SA) for details on coil selection.

Precautions for model No. selection

*1: Orders for only the masking plate and sub-plate are also available. Contact CKD for details.

Notes for Item (C)

*2: For 11 or more manifold station No., contact CKD.

Notes for Item (E)

*3: Coils for 5A, 5I, and 5J convert AC voltage to DC with a diode.

Notes for Items (G) to (H)

*4: For Item (C), select an option from G and H.

*5: The surge suppressor is attached with the lead wire coil. When selecting a coil with a terminal box, the surge suppressor is mounted in the terminal box.

*6: Surge suppressor is incorporated as standard in the coil with diode.

Notes for Item (I)

*7: 100 VAC coil can be used at 100 VAC 50/60Hz and 200 VAC coil can be used at 200 VAC 50/60Hz.

*8: For voltages other than above, contact CKD.

*9: The lead wire is available in the standard 300mm length, as well as 500mm, 1000mm, 2000mm and 3000mm lengths. Contact CKD for more information.

Direct acting 3-port solenoid valve for dry air, manifold/actuator
(general purpose valve)

GAG33*/GAG43*- Z Series

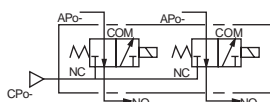
- NC pressurization
- Common supply/individual exhaust

RoHS



JIS symbol

- GAG33*/GAG43*-Z
(Common supply/individual exhaust)



Common specifications

Item	Standard specifications
Working fluid	Dry air (atmospheric dew point -70°C and over)/inert gas/low vacuum [1.33×10^2 Pa(abs)]
Working pressure differential MPa	0 to 1 (refer to max. working pressure differential in individual specifications.)
Max. working pressure MPa	1
Proof pressure (water pressure) MPa	10
Fluid temperature °C	-10 to 45 (no freezing)
Ambient temperature °C	-10 to 45
Thermal class	Class 130 (B)
Atmosphere	Place free of corrosive gas and explosive gas
Valve structure	Direct acting poppet structure
Valve seat leakage Recm ³ /min(ANR)	0.2 or less
Mounting orientation	Unrestricted

Individual specifications

Item	NO port Port size	Orifice size (mm)		Max. working pressure differential (MPa)	Rated voltage	Power consumption (W)	
Model No.		TOP	BODY			AC50/60Hz	DC
GAG331-1-Z	Rc1/8	1.5	1.5	1.0	100 VAC 50/60Hz	17	14
-2-Z		2.0	2.0	0.7			
GAG332-1-Z	Rc1/4	1.5	1.5	1.0	200 VAC 50/60Hz		
-2-Z		2.0	2.0	0.7			
GAG432-4-Z	Rc1/4	3.0	3.0	0.7	12 VDC 24 VDC 48 VDC 100 VDC		
-5-Z		3.5	3.0	0.4			
GAG433-4-Z	Rc3/8	3.0	3.0	0.7			
-5-Z		3.5	3.0	0.4			

*1: The model numbers above are for the basic NO port size (Rc) and orifice size. Refer to How to order for other combinations.

*2: Refer to How to order and Dimensions in "General Purpose Valves" (catalog No. CB-03-1SA) for port size of ports A and C.

*3: The voltage fluctuation range must be $\pm 10\%$ of the rated voltage.

*4: The leakage current must be less than or equal to the values shown below.

*5: When using at low vacuum, vacuum the NO port side.

Leakage current	Voltage	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
	Model No.						
	GAG33*-*****Z	6 mA or less	3 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less
	GAG43*-*****Z	8 mA or less	4 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less

Compatibility table by variation

	GAG3/GAG4-Z
Classification	Direct acting 3-port valve for dry air
Body material	Stainless steel
P4	●
P40	●

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

*1: Body material Select from stainless steel products.

*2: Body material/Seal combination code M only.

*3: Pipe material is SUS316.

How to order

● Common supply/individual exhaust (port C pressurization)

GAG33 **1** **2** **6** **M** **5A** **A** **G** **S** **Z** **P4** **P40** **AC100V**

GAG43

Model No.

A NO port size

B Orifice size

C Manifold station No.
*2

D Body/sealant combination

E Coil housing
F Manual override (locking)
G Other options
H With surge suppressor
I Rated voltage

Model No.

GAG33* GAG43*



Code	Item	GAG33*	GAG43*
A NO port size			
1	1/8	●	
2	1/4	●	●
3	3/8		●
B Orifice size			
		GAG33*	
		TOP	BODY
1	ø1.5	ø1.5	-
2	ø2.0	ø2.0	-
4	-	-	ø3.0
5	-	-	ø3.5
C Manifold station No.			
2	2 stations		
to	to	●	●
10	10 stations		
0	Actuator only	●	●
D Body/sealant combination			
	Body	Seal	Treatment
M	Stainless steel	Fluoro rubber	Oil-prohibited
			Remarks
			—


The combinations indicated with ● in the above table are available.

For Items (E) to (I), the combinations indicated with codes are available. Note that if options for Items (F) to (H) are not required, they should be left blank.

E Coil housing			F	G Other options		H	I Rated voltage
Description			Manual override (Locking)	Conduit		With surge suppressor	Description
				(Conduit piping)			
				CTC-19	G1/2		
3A	Open Frame type	Lead wire	A	G	H	S	12 VDC, 24 VDC, 48 VDC, 100 VDC
3I		HP terminal box (IP65 or equivalent) (G1/2)					
3J		HP terminal box with lamp (IP65 or equivalent) (G1/2)					12 VDC, 24 VDC, 100VDC
5A	Open Frame type	Lead wire	A	G	H		100 VAC, 200 VAC
5I		HP terminal box (IP65 or equivalent) (G1/2)					
5J		HP terminal box with lamp (IP65 or equivalent) (G1/2)					

▲ Refer to the following cautions for Items (E) to (I).

3A 5A		<ul style="list-style-type: none"> Open frame Grommet lead wire 300 mm 5A (diode integrated)
3I 3J 5I 5J		<ul style="list-style-type: none"> Open frame HP terminal box (IP65 or equivalent) 5I, 5J (diode integrated)

G H		<ul style="list-style-type: none"> Conduit G (CTC19) H (G1/2)
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Refer to "General Purpose Valves" (catalog No. CB-03-1SA) for details on coil selection.

⚠ Precautions for model No. selection

*1: Orders for only the masking plate and sub-plate are also available. Contact CKD for details.

Notes for Item **C**
*2: Contact CKD regarding manifold station No. of 11 stations or more.

Notes for Item **E**
*3: Coils for 5A, 5I, and 5J convert AC voltage to DC with a diode.

Notes for Items **G** to **H**
*4: For Item **G**, select an option from G and H.

*5: The surge suppressor is attached with the lead wire coil. When selecting a coil with terminal box, the surge suppressor is mounted in the terminal box.
*6: Surge suppressor is incorporated as standard in the coil with diode.

Notes for Item **I**
*7: 100 VAC coil can be used at 100 VAC 50/60Hz and 200 VAC coil can be used at 200 VAC 50/60Hz.

*8: Contact CKD for voltages other than above.

*9: The lead wire is available in the standard 300mm length, as well as 500mm, 1000mm, 2000mm and 3000mm lengths. Contact CKD for more information.