

Direct acting 2-port solenoid valve for dry air General purpose

AB31/AB41-Z Series

- NC (open when energized)
- Port size: Rc1/8 to Rc1/2



 $1 MP_2 = 10 har$

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

JIS symbol

EXA

FWD

HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G FHB

FLB AB AG AP/ AD

APK/ ADK

Common	specifications
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, j		
 NC (open when energized) 	Item	Standard specifications
OUT	Working fluid	For dry air (atmospheric dew point -60°C and over)/inert gas/low vacuum [1.33 x 10 ² Pa (abs)]
	Working pressure differential MPa	0 to 4 (refer to max. working pressure differential in individual specifications.)
	Max. working pressure MPa	5 (≈730 psi, 50 bar)
	Proof pressure (water pressure) MPa	25 (≈3600 psi, 250 bar)
	Fluid temperature °C	-10 (14°F) to 45 (113°F) (no freezing)
	Ambient temperature °C	-10 (14°F) to 45 (113°F)
	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
i		

Individual specifications

DryAir													
	Item		Dort oizo	Orifice size	Max. working pressure	Rated voltage	Power cons	umption (W)	Weight				
EX- XPLNprf	Model N	lo.	Port size	(mm)	differential (MPa)	Raled vollage	AC	DC	(kg)				
XPLNprf	AB31- 01 02	-1-****Z		1.5	2.5 (≈360 psi)								
•		-2-****Z		2.0	1.5 (≈220 psi)								
HVB/ HVL		-3-****Z	Rc1/8	3.0	0.5 (≈73 psi)	100 VAC 50/60 Hz			0.45				
S≎B/		-4-****Z	Rc1/4	3.5	0.35 (≈51 psi)				0.45				
NAB		-5-****Z		4.0	0.2 (≈29 psi)	200 VAC 50/60 Hz							
LAD/ NAD		-6-****Z		5.0	0.12 (≈17 psi)								
Water-	AB41- 02 03	-1-****Z		1.5	4.0 (≈580 psi)		17	14					
Rela		-2-****Z		2.0	2.5 (≈360 psi)	12 VDC	17	14	0.57				
NP/NAP/ NVP		-3-****Z	Rc1/4	3.0	0.9 (≈130 psi)	24 VDC			(Rc1/4)				
		-4-****Z	Rc3/8	3.5	0.6 (≈87 psi)	48 VDC							
SNP		-5-****Z	RC3/0	4.0	0.4 (≈58 psi)	100 VDC			0.59				
CHB/G		-6-****Z		5.0	0.2 (≈29 psi)				(Rc3/8)				
		-7-****Z		7.0	0.1 (≈15 psi)								
MXB/G	AB41- 03	-8-****Z	Rc3/8 / Rc1/2	10.0	0.03 (≈4.4 psi)				0.68				
Other	*1 : The m	odel numbers above show th	e basic port size (Rc)	. Refer to How to ord	er for other combination	ons.							

*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). valves

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

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

 $^{\star5}\,$: When using at low vacuum, vacuum the OUT port side.

) /	current	Voltage Model No.	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
E	Leakage	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
D	Lea	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

MWD DustColl CVE/ **CVSE** CCH/ CPE/D LifeSci Gas-Combus Auto-Water Outdoor SpecFld Custom Ending

SWD/

Flow characteristics

		Dout oine		Flow chara	acteristics
Model N	0.	Port size	Orifice size (mm)	C[dm³/(s·bar)]	b
NC (ope	n when energized)				
AB31- 01 02	-1-****Z		1.5	0.29	0.53
	-2-****Z		2.0	0.53	0.52
	-3-****Z		3.0	1.1	0.52
	-4-****Z	Rc1/8	3.5	1.7	0.49
	-4- Z	Rc1/8	3.5	[1.5]	[0.47]
	-5-****Z	RC1/4	4.0	2.1	0.48
	-0- 2		4.0	[1.9]	[0.47]
	-6-****Z		5.0	3.0	0.42
	-0- 2			[2.6]	[0.38]
AB41- 02 03	-1-****Z		1.5	0.29	0.53
	-2-****Z		2.0	0.53	0.52
	-3-****Z		3.0	1.1	0.52
	-4-****Z		3.5	1.7	0.49
	-4- 2	Rc1/4	5.5	[1.5]	[0.47]
	-5-****Z	Rc3/8	4.0	2.1	0.48
	-0- 2	RC3/0	4.0	[1.9]	[0.47]
	-6-****Z		5.0	3.0	0.42
	-0- 2		5.0	[2.6]	[0.38]
	-7-****Z		7.0	4.8	0.29
	-1- ∠		7.0	[4.6]	[0.37]
AD41 03	-8-****Z	Rc3/8	10.0	9.3	0.36
AD4 1- 04	-o- ∠	Rc1/2	10.0	[8.1]	[0.31]

*1 : Effective cross-sectional area S and sonic conductance C are converted as S \approx 5.0 x C.

*2 : Dimensions shown in [] are for stainless steel body.

EXA FWD HNB/G USB/G FAB/G FGB/G FVB FWB/G FHB FLB AB AG AP/ AD APK/ ADK DryAir EX-XPLNprf XPLNprf HVB/ HVL S∜B/ NAB LAD/ NAD Water-Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CPE/D LifeSci Gas-Combus Auto-Water Outdoor SpecFld Custom Ending 333

EXA	How to order											
FWD	(AB31)-(02)-(3)-(H 3A A B G	S Z	- (n	C24V							
HNB/G				C								
USB/G	(AB41)	D Coil housing) Other optic	ons								
FAB/G	Model No.				Vo	ltage						
FGB/G		Manual over		•,								
FVB		Mount		i surge	suppres	ssor				Mo	odel N	NO. AB41
FWB/G			Code	Des	cription	Code	Description	Code	Description	AB31	AB41	Low pressure Large flow
FHB	A Port size		A Port		c1/8	1G	G1/8	1N	1/8NPT			
FLB			02	R	c1/4	2G	G1/4	2N	1/4NPT	•	•	
AB			03 04		c3/8 c1/2	3G 4G	G3/8 G1/2	3N 4N	3/8NPT 1/2NPT			•
AG	B Ori	l fice size	B Orifi	ice si ø1.5	ze							
AP/ AD			2	ø2						•	•	
APK/ ADK			3 4	ø3 ø3.5						•	•	
DryAir			5 6	ø4 ø5						•	•	
EX- XPLNprf			7 8	ø7 ø10							•	
XPLNprf			C Bod		lant co	mbinat	ion					
HVB/ HVL	*1	Body/sealant combination	н	Body folle	Nitrile ru	Seal ubber	Treatm	nent	Remarks —	•	•	
S☆B/ NAB	*2		J P	l e	Fluoro r Ethylene p		ıbber Oil-		_	•	•	
LAD/ NAD			L	s steel C	Nitrile ru	ıbber	prohib		_	•	•	•
Water- Rela			M R		Ethylene p		ıbber			•	•	•
NP/NAP/ NVP			Refe	er to I	Intro Pa	age 39	for refere	nce on	material con	nbina	itions	3.
SNP			D to D									
CHB/G					age 33 e, etc.	5 for d	etails on th	ne coil h	nousing, othe	er op	tions	
MXB/G						with $lacksquare$ in	the above ta	ble are ava	ailable.			
Other valves												
SWD/ MWD												
DustColl												
CVE/ CVSE												
CCH/ CPE/D												
LifeSci	[Example of model No.] AB31-02-3-H3ABSZ-											
Gas- Combus	Model : AB31	: Rc 1/4										
Auto- Water	B Orifice size	: ø3										
Outdoor		Open frame lead wire for			er.	Â	Precaut	ions fo	or model N	0. S	elec	tion
SpecFld		With mounting plate					es for O	he low pro	ssure large flow r	ate A P	41-03/	04-8 ic
Custom	Burge suppressor	None With surge suppressor				I	bronze (standa	ard) or stai	nless steel (option ng oil with ethyler	ר).		
Ending	Voltage	24 VDC				:	since it is not o	oil-resistant	t.			



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

NOLE L	παι π ορι			CHOLI	cyunc	a, ano	y shou		cit biai	IIX.			
DC	oil hous	sing		B	F	G	Other	optio	ons		0	I Rated voltage	FWD
_				verride	g plate		ible gla e cable		Cor (condui	nduit t piping)	With surge suppressor		HNB/G
Desc	cription			Manual override (Locking)	Mounting plate				CTC19	G1/2 G1/2 G1/2		Description	USB/G
3A	-	· · · · ·	IP65 or equivalent)				1		G	н		12 VDC, 24 VDC, 48 VDC, 100 VDC	FAB/G
3M 3N	Open frame		rminal box (G1/2)		в		_	_			S	12 VDC, 24 VDC, 100 VDC	FGB/G
3I 3J	Irame	HP terminal box (IF HP term box, larr	1 / ()			D	E	F				12 VDC, 24 VDC, 48 VDC, 100 VDC 12 VDC, 24 VDC, 100 VDC	FVB
5A		,	IP65 or equivalent)						G	Н			FWB/G
5M 5N	Open frame	With HP ter HP terminal b	minal box (G1/2) ox with lamp (G1/2)	-	в							100 VAC, 200 VAC	
51	(diode integrated)	HP terminal box (IP	1 ()	-	Б	D	E	F				100 VAC, 200 VAC	FHB
5J]	HP term box, lam	p (IP65, equiv) (G1/2)										FLB
										₽ E	Refer to	the following cautions for Items \textcircled{D} to \textcircled{D} .	AB
													AG
3A 5A		0	 Open frame Lead wire 30 							3		Conduit G(CTC19)	AP/ AD
		5	● 5A (diode inte	egrated)				-			• H(G1/2)	APK/ ADK
3M				ID (DryAir
3N 5M 5N			 Open frame I 5M, 5N (diode 			x							EX- XPLNprf
													XPLNprf
31 3J			 Open frame F equivalent) 	HP term	ninal bo	x (IP65	or						HVB/ HVL
51 5J	51 FL (diada integrated)											S∜B/ NAB	
													LAD/ NAD

Refer to page 330 for coil selection.

A Precautions for model No. selection

Notes for **D**

*3 : Coils for 5A/5M/5N/5I/5J have a diode to convert AC to DC voltage. Voltage of less than 100 VAC is not available.

Notes for **(**) to **(**)

- *4 : Manual override (Item (A) cannot be mounted on the low pressure large flow rate AB41-03/04-8.
- *5 : For G, select an option from D, E, F, G and H.
- *6 : 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.
- *7 : Surge suppressor is incorporated as standard in the coil with diode.
 *8 : Tropicalization (rust-proof coating) is available as a measure against

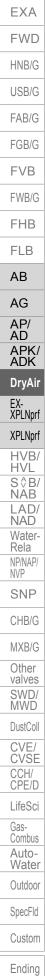
rust. Contact CKD for more information. Note that tropicalization is not available when the manual override option (A) is selected.

Notes for

- *9 : 100 VAC coil is compatible with 100 VAC 50/60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz.
- *10 : For voltages other than above, contact CKD.
- *11 : The lead wire is available in the standard 300 mm length, and 500 mm, 1000 mm, 2000 mm and 3000 mm lengths. Contact CKD for more information.

EXA

Internal structure and parts list



XA	Inte	ernal struc	cture and parts lis	st									
WD	• AE	331/41-Z Serie	es										
NB/G				~	<u> </u>	~							
SB/G					ł	╧┻╌╴							
B/G							7	F					
B/G				0		$\ \bigvee_{\Gamma}$							
VB				8	Ð	$\ /$	7	<u> </u>					
VB/G													
HB				6 R		L A							
B				0	┍╢║┖━	°]″∖							
В				8	╞╋╧┫								
G				9	' Y-U								
P/				•			Tł	he figure sho	ows AB31				
D PK/	No	Bort nomo	Material		No.	Port no		Material					
PK/ DK	No. 1	Part name Coil assembly		, ,	6	Part na Plunger s		SUS304		, ,	Stainless s	stool	
yAir	2	Core assembly	- SUS405 or equiv.316/403 *1	Stainless steel	7	O-ring		NBR (FKM/	(EPDM)		IBR: Nitrile		
-	3	Plunger cushion	PFA	Tetrafluoroethylene resin	8	Valve sea		NBR (FKM/		(F	FKM: Fluoro	o rubber) vlene propyle	ne rubber)
LNprf	4	Plunger	SUS405 or equiv.	Stainless steel	9	Body		C3771/CAC					
LNprf	5	Wear ring	POM	Acetal resin									<u> </u>
VB/ VL \$B/ AB AD/ AD		nensions	CAD										
AD ater- ela /NAP/ P		B31/41-*-1 to 7		AB41-03/04-8- H 3. J P	A ****Z A								
NP		F	G	ь Н ч									
IB/G													
KB/G			-8-										
her lves													
ND/ WD													
stColl													
		+	 2-M5 depth 8	−- +									
VE/ VSE CH/ PE/D													
eSci	0												
s- mbus													
uto- ater													
			Model	No	А	В	С	D	E	F	G	н	J
itdoor				-1 to 6-*****Z	36	28	11	50.5	75	24	38	38	Rc1/8 Rc1/4
ecFld				-1 to 6-*****Z	36	28	11	52	80.5	28	42	46	Rc1/4 Rc1/4

36

40

50

28

28

29

11

12

15

52

55

64

80.5

83.5

92.6

28

28

28

42

42

42

46

46

46

Rc1/4

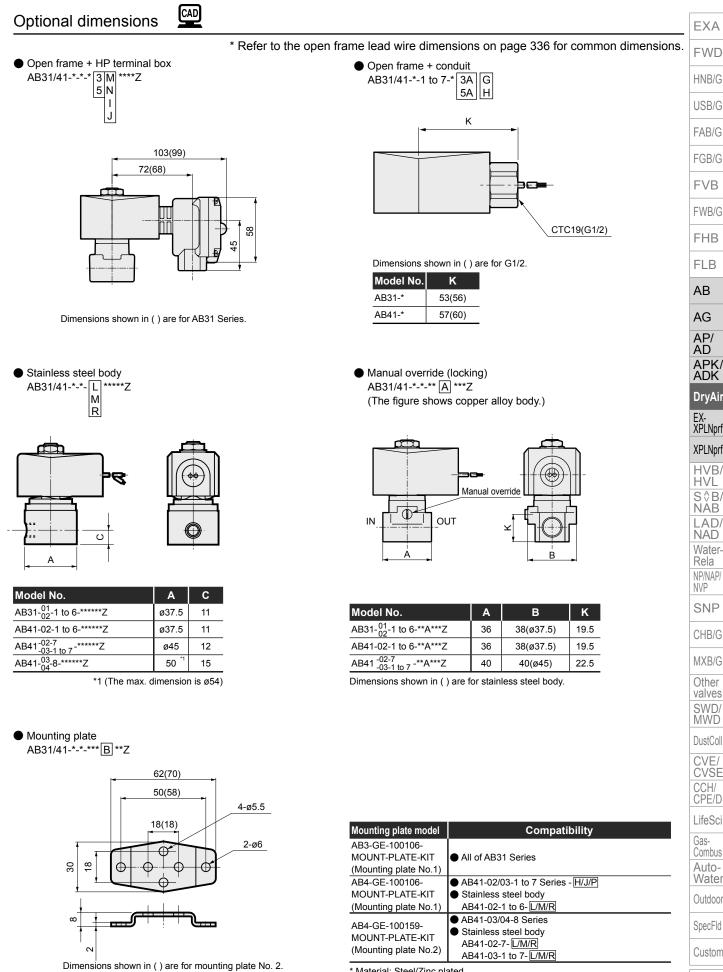
Rc1/4 Rc3/8 Rc3/8 Rc1/2

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AB41-02-1 to 6-****Z

AB41 -02-7 -03-1 to 7 -*****Z

AB41-03-8-****Z



* Material: Steel/Zinc plated

Ending

CKD



Direct acting 2 port solenoid valve for dry air, manifold/actuator General purpose

GAB312/GAB352/GAB412/GAB452-Z Series

- NC (open when energized)
- Common supply (port C pressurization), individual supply (port A pressurization)



1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

FAB/G JIS symbol Common specifications • GAB312/412-Z FGB/G (Common supply/ FVB port C pressurization) A port A port FWB/G LOUT FHB เพ C port FLB GAB352/452-Z (Individual supply/port A pressurization) AP/ AD

USB/G

AB

AG

APK/ ADK DryAir EX-

valves

SWD/

MWD

CVE/ **CVSE** CCH/ CPE/D

LifeSci Gas-Combus Auto-

	Item	Standard specifications
	Working fluid	For dry air (atmospheric dew point -60°C and over)/inert gas/low vacuum [1.33 x 10 ² Pa (abs)]
	Working pressure differential MPa	0 to 4 (refer to max. working pressure differential in individual specifications.)
t	Max. working pressure MPa	5 (≈730 psi, 50 bar)
Г	Proof pressure (water pressure) MPa	10 (≈1500 psi, 100 bar)
	Fluid temperature °C	-10 (14°F) to 45 (113°F) (no freezing)
	Ambient temperature °C	-10 (14°F) to 45 (113°F)
	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

VDI Norf													
XPLNprf	Item	Dout oire	Orifice size	Max. working pressure	Rated voltage	Power consur	nption (W)						
XPLNprf	Model No.	Port size	(mm)	differential (MPa)	Raled vollage	AC50/60 Hz	DC						
HVB/	GAB312/352-1-Z		1.5	2.5 (≈360 psi, 25 bar)									
HVL S≎B/	-2-Z		2.0	1.5 (≈220 psi, 15 bar)	(00) (0.0								
S∨B/ NAB	-3-Z		3.0	0.5 (≈73 psi, 5 bar)	100 VAC 50/60 Hz								
LAD/	-4-Z		3.5	0.35 (≈51 psi, 3.5 bar)	30/00 112								
NAD	-5-Z		4.0	0.2 (≈29 psi, 2 bar)									
Water- Rela	-6-Z		5.0	0.12 (≈17 psi, 1.2 bar)	200 VAC								
NP/NAP/	GAB412/452-1-Z		1.5	4.0 (≈580 psi, 40 bar)	- 50/60 Hz -	17	14						
NVP	-2-Z		2.0	2.5 (≈360 psi, 25 bar)									
SNP	-3-Z		3.0	0.9 (≈130 psi, 9 bar)	12 VDC								
	-4-Z		3.5	0.6 (≈87 psi, 6 bar)	24 VDC 48 VDC								
CHB/G	-5-Z		4.0	0.4 (≈58 psi, 4 bar)	100 VDC								
MXB/G	-6-Z		5.0	0.2 (≈29 psi, 2 bar)									
Other	-7-Z		7.0	0.1 (≈15 psi, 1 bar)									
0 0101													

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

*2 : For port size, refer to How to order (page 340) and dimensions (pages 178 to 181).

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

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

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

current	Voltage Model No.	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
kage	GAB312/352*-*-*****Z 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
Lea	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

Water Weiaht

Weight (kg)											
s 10 stations											
7.3											
9.1											
n :											

GAB312/352/412/452-Z Series

Flow characteristics

Model No	Derteine		Flow characteristics				
Model No.	Port size	Orifice size (mm)	C[dm³/(s·bar)]	b			
GAB312/352 -1-Z		1.5	0.29	0.53			
-2-Z		2.0	0.53	0.52			
-3-Z		3.0	1.1	0.52			
-4-Z		3.5	1.5	0.47			
-5-Z		4.0	1.9	0.47			
-6-Z		5.0	2.6	0.38			
GAB412/452 -1-Z		1.5	0.29	0.53			
-2-Z		2.0	0.53	0.52			
-3-Z		3.0	1.1	0.52			
-4-Z		3.5	1.5	0.47			
-5-Z		4.0	1.9	0.47			
-6-Z		5.0	2.6	0.38			
-7-Z	1	7.0	4.6	0.37			

*1 : Effective cross-sectional area S and sonic conductance C are converted as S \approx 5.0 x C.

Internal structure and parts list

Same as AB31/41-Z Series. Refer to page 336.

Dimensions

The same as the open frame of GAB Series. Refer to pages 178 to 181.

EXA FWD HNB/G USB/G FAB/G FGB/G FVB FWB/G FHB FLB AB AG AP/ AD APK/ ADK DryAir EX-XPLNprf XPLNprf HVB/ HVL S≎B/ NAB LAD/ NAD Water-Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CPE/D LifeSci Gas-Combus Auto-Water Outdoor SpecFld Custom Ending 339

GAB312/352/412/452-Z Series

EXA	How to order								
	Common supply (port C pr	ressurization)	\sim	\sim					
FWD	GAB312 - 1)-(5)-(H)5A	AG) S) Z -(AC100	V			
HNB/G	Individual supply (port A pr	essurization)	 bousing	g 🗍	With surge suppre	essor			
USB/G	GAB352		Manua	al ove	rride (locking)	Rated voltage		Mode	el No.
FAB/G	Common supply (port C pr	ressurization)	G	Othe	roptions				GAB412
FGB/G	(GAB412)		-						GAB452
FVB	Individual supply (port A pr	ressurization)	Code			Description			
	GAB452 Thread		A Three	1					
FWB/G	Model No.		Blank G	Rc G				•	•
FHB			N	NPT				•	•
FLB	B	Orifice size	B Orifi	ice si ø1.5					
AB			2	ø1.c				•	•
			3	ø3				•	•
AG			4 5	ø3.5 ø4)				•
AP/ AD			6	ø5				•	•
APK/ ADK			7	ø7	station No.				
DryAir		Manifold station No.	© Man 2		station No.				
	*2	2	to		to			•	•
EX- XPLNprf			10 0		ator only			•	•
XPLNprf			÷		alant combinati	ion			
HVB/ HVL		Body/sealant combination		Body	Seal	Treatment	Remarks		
S≎B/		*3	H	er alloy	Nitrile rubber Fluoro rubber			•	•
NAB LAD/ NAD			P		Ethylene propylene rul	bber Oil-		•	•
NAD Water-			L	s i	Nitrile rubber Fluoro rubber	prohibited	—	•	•
Rela	[Example of model No.	1]	M R	Ē	Ethylene propylene rul	bber		•	•
NP/NAP/ NVP	GAB312-1-3-H5AZ-A	C200V	Re		o Intro Page 3	9 for reference	e on material com	bination	s.
SNP	Model : GAB312 (common supple)	ly, port C pressurization)	E to C		-				
CHB/G	B Orifice size : ø1.5				ago 241 for doi	taile on the or	il bouging		
	C Manifold station No.: 3 sta D Body/sealant combination				age 341 for det		ii nousing,		
MXB/G Other	: Bod	y - copper alloy,			s indicated with in		available		
valves	•	ant - nitrile rubber n frame(diode							
SWD/ MWD	•	grated) lead wire for voltage							
DustColl	to to : Non	•							
CVE/	Rated voltage : 200	VAC 50/60 Hz							
CVSE									
CCH/ CPE/D	[Example of model No.	2]							
LifeSci	GAB352G-5-2-H3AA								
Gas- Combus	Model : GAB352 (individual s A Thread	upply/port A pressuriza :G	tion)						
Auto-	B Orifice size	:ø4			ЛО	recautions	for model No. s	alactic	'n
Water	C Manifold station No. D Body/sealant combination	: 2 stations : Body - copper alloy, se	alant - nitri	ile rub					
Outdoor	Coil housing	: Open frame lead wire				ailable. Contact CKE	sking plate and sub-plate for details.	ai e aiso	
SpecFld	Manual override (locking)Other options	: With : None				s for O to D			
Custom	 Surge suppressor Rated voltage 	: With surge suppresso : 24 VDC	or		*3 : Do		d station No., contact CK ning oil with ethylene prop Int.		er,

Ending

340 **CKD**

GAB312/352/412/452-Z Series

	_	_										
			ombinations in ems \bigcirc to \bigcirc a						ık.			EXA
	oil hous			F		ther o				θ	Rated voltage	FWD
				a (B		ble gla			nduit	rge ssor		HNB/G
Desc	ription			Manual override (Locking)	(marine cable A-15a A-15b		b A-15c CTC			With surge suppressor	Description	USB/G
3A			IP65 or equivalent)	200				G	Н	> v	12 VDC, 24 VDC, 48 VDC, 100 VDC	FAB/G
3M 3N	Open		minal box (G1/2)	А						S	12 VDC, 24 VDC, 100 VDC	FGB/G
31	frame	HP term box (IP65, equiv) (G1/2)	~	D	Е	F	5		U	12 VDC, 24 VDC, 48 VDC, 100 VDC	
3J		HP term box, lam	ıp (IP65, equiv) (G1/2)								12 VDC, 24 VDC, 100 VDC	FVB
5A 5M	Open	Lead wire (With HP ter	IP65 or equivalent) minal box (G1/2)					G	Н			FWB/G
5N	(diode HP term bey (IP65 equiv) (C1/2)			Α	D	Е	F				100 VAC, 200 VAC	FHB
51 5J	integrated)	HP term box (HP term box, lam										FLB
										🛕 Re	fer to the following cautions for Items \textcircled{E} to \textcircled{D} .	AB
												AG
3A 5A		0	 Open frame lead wire 30 5A (diode in 	0 mm					G			AP/ AD
		~		legraled)								APK/ ADK
3M	1.00											DryAir
3N 5M 5N			 Open frame 5M, 5N (dio 	HP terminal b de integrated)	OX							EX- XPLNprf
												XPLNprf
3I 3J 5I			Open frame (IP65 or equ		ох							HVB/ HVL
51 5J			● 5I, 5J (diode									S∜B/ NAB
												LAD/ NAD
	Ref	fer to p	age 330 f	or coil								Water- Rela

selection.

A Precautions for model No. selection

Notes for E

*4 : Coils for 5A/5M/5N/5I/5J have a diode to convert AC to DC voltage. Notes for G to H

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

- *6 : 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.
- *7 : Surge suppressor is incorporated as standard in the coil with diode.
- *8 : Tropicalization (rust-proof coating) is available as a measure against rust. Contact CKD for more information.
 - Note that tropicalization is not available when the manual override option (A) is selected.

Notes for **①**

- *9 : 100 VAC coil is compatible with 100 VAC 50/60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz.
- *10 : For voltages other than above, contact CKD.
- *11 : The lead wire is available in the standard 300 mm length, and 500 mm, 1000 mm, 2000 mm and 3000 mm lengths. Contact CKD for more information.

CKD

Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CPE/D LifeSci Gas-Combus Auto-Water Outdoor SpecFld Custom Ending 341



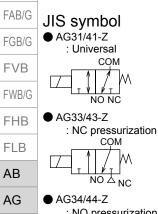
Direct acting 3-port solenoid valve for dry air General purpose

AG3*/AG4*-Z Series

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



1 MPa ≈ 145.0 psi, 1 MPa = 10 bar



EXA

FWD

HNB/G

USB/G

AB

AG

AP/ AD

APK/ ADK

DryAir



Common specifications

Item	Standard specifications
Working fluid	For dry air (atmospheric dew point -60°C and over)/inert gas/low vacuum [1.33 x 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 (≈3600 psi, 250 bar)
Fluid temperature °C	-10 (14°F) to 45 (113°F) (no freezing)
Ambient temperature °C	-10 (14°F) to 45 (113°F)
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

EX-	Individual specifications								1 MP	a = 10 bar
XPLNprf	Item	Port size	Orifice s	ize (mm)	Max. working pressure differential	Max. working pressure	Rated	Power of	consump (W)	Weight
XPLNprf	Model No.	FUIT SIZE	TOP	BODY	(MPa)	MPa	voltage	AC	DC	(kg)
HVB/	Universal									
HVL	AG31- ⁰¹ ₀₂ -1-*****Z	Rc1/8	1.5	1.5	0.7 (≈100 psi)					0.45
S≎B/	-2-****Z	Rc1/4	2.0	2.0	0.4 (≈58 psi)	1				
NAB LAD/	AG41- ⁰² ₀₃ -1-*****Z	Rc1/4	2.0	2.0	0.65 (≈94 psi)					0.57 (Rc1/4) 0.59 (Rc3/8)
NAD/	-2-****Z	Rc3/8	2.3	2.3	0.4 (≈58 psi)		100 VAC			0.59 (Rc3/8)
Water-	NC pressurization						50/60 Hz			
Rela	AG33-01 -1-*****Z	Rc1/8	1.5	1.5	1.0 (≈150 psi)		200 VAC			0.45
NP/NAP/ NVP	-2-****Z	Rc1/4	2.0	2.0	0.7 (≈100 psi)	1	50/60 Hz	17	14	
SNP	AG43-02 -4-****Z	Rc1/4	3.0	3.0	0.7 (≈100 psi)				14	0.57 (Rc1/4) 0.59 (Rc3/8)
SNP	-5-****Z	Rc3/8	3.5	3.0	0.4 (≈58 psi)					0.59 (Rc3/8)
CHB/G	NO pressurization						12 VDC			
	AG34- ⁰¹ ₀₂ -1-****Z	Rc1/8	1.5	1.5	1.0 (≈150 psi)		24 VDC 48 VDC			0.45
MXB/G	-2-****Z	Rc1/4	2.0	2.0	0.45 (≈65 psi)		48 VDC 100 VDC			0.45
Other	AG44- ⁰² ₀₃ -1-****Z	Rc1/4	2.0	2.0	0.75 (≈110 psi)	1.5				0.57
valves	-3-****Z	RC1/4 Rc3/8	2.0	3.0	0.7 (≈100 psi)]				(Rc1/4) 0.59
SWD/ MWD	-4-****Z	RU3/0	3.0	3.0	0.25 (≈36 psi)					(Rc3/8)

*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) and 03 for Rc3/8 (10A).

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

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

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

current	Voltage Model No.	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
(age		6 mA or less	3 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less
Leal		8 mA or less	4 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less

CCH/ CPE/D LifeSci Gas-Combus Auto-Water Outdoor SpecFld Custom

DustColl

CVE/

CVSE

AG3*/4*-Z Series

Flow characteristics

		Orifice s	ize (mm)	Flow characteristics						
Model No.	Port size	тор	DODY	C[dm ³ /	′(s·bar)]		b			
		ТОР	BODY	TOP	BODY	ТОР	BODY			
Universal										
AG31- ⁰¹ ₀₂ -1-*****Z	Rc1/8	1.5	1.5	0.29	0.29	0.64	0.53			
-2-****Z	Rc1/4	2.0	2.0	0.53	0.53	0.54	0.52			
AG41- ⁰² ₀₃ -1-*****Z	Rc1/4	2.0	2.0	0.53	0.53	0.54	0.52			
-2-****Z	Rc3/8	2.3	2.3	0.74	0.74	0.66	0.53			
NC pressurization										
AG33- ⁰¹ ₀₂ -1-*****Z	Rc1/8	1.5	1.5	0.29	0.29	0.64	0.53			
-2-****Z	Rc1/4	2.0	2.0	0.53	0.53	0.54	0.52			
AG43- ⁰² ₀₃ -4-****Z	Rc1/4	3.0	3.0	1.1	1.1	0.72	0.52			
-5-****Z	Rc3/8	3.5	3.0	1.5	1.1	0.62	0.52			
NO pressurization										
AG34- ⁰¹ ₀₂ -1-****Z	Rc1/8	1.5	1.5	0.29	0.29	0.64	0.53			
-2-****Z	Rc1/4	2.0	2.0	0.53	0.53	0.54	0.52			
AG44- ⁰² ₀₃ -1-****Z	De1/4	2.0	2.0	0.53	0.53	0.54	0.52			
-3-****Z	Rc1/4	2.0	3.0	0.53	1.1	0.54	0.52			
-4-****Z	Rc3/8	3.0	3.0	1.1	1.1	0.72	0.52			

*1 : Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

EXA

EXA	How to order																		
FWD	• Universal	$\neg \frown \frown$	\frown				-												
HNB/G	(AG31)-(02)-(2)-(H (3A) A	B	G	S	Z -(D	C24												
USB/G	AG41																		
FAB/G	NC pressurization	Coil ho	using 	Go	ther o	options													
FGB/G	AG33					ocking)		Itage							N	lode	el No	э.	
FVB	(AG43)		E M	ountir	ng pla	ite /ith surge s	-	-						AG31	AG41	AG33	AG43	AG34	AG44
FWB/G	NO pressurization	Code		escript	tion	Code	Des	criptior	n (Code	De	escript	ion	∣∢	4	◄	4	4	A
FHB	AG34 Port size	01	Rc1	/8		1G		G1/8		1N		1/8NP						•	
		02	Rc1			2G 3G		91/4 93/8		2N 3N		1/4NP ⁻ 3/8NP ⁻		•	•	•	•	•	•
FLB	(AG44) B Orifice	B Ori	fice s	ize							1								
AB	D Onice	5120			-	S41 A BODY TOP		AG TOP		-	34 BODY		644 BODY						
AG	Model No.	1	ø1.5	ø1.5	ø2.0	ø2.0 ø1.5	ø1.5	-	-	ø1.5	ø1.5	ø2.0	ø2.0	•	•	•		•	•
AP/		2	ø2.0	ø2.0 -	ø2.3	ø2.3 ø2.0	ø2.0	-	-	ø2.0	ø2.0	- ø2.0	- ø3.0	•	•	•		•	
AD APK/		4	-	-	-		-	- ø3.0	- ø3.0	-	-	ø2.0 ø3.0	ø3.0						•
ADK		5	-	-	-		-	ø3.5	ø3.0	-	-	-	-						
DryAir	C Body/se	ealant	dy/se Body			nbination eal		eatme	nt		Rem	arks							
EX- XPLNprf	combin *1	н	alloy		e rubl						_	_		•	•	•	•	•	•
XPLNprf	*2	J	Copper :		ro rub	bber pylene rubber	·					_		•	•	•	•	•	•
HVB/		L	steel	Nitril	e rubl	ber	- Oil-	prohib	ited		_	_		•	•	•	•	•	•
HVL S≎B/		M R	Stainless		ro rub	bber pylene rubber	•					_		•	•	•	•	•	•
NAB LAD/						ntro Pag		for re	ferer	nce o	n mat	terial	com	bina	ation	ns.			
NAD Water-		D to									-								
Rela			-	nade	345	5 for deta	ails or	the i	coil ł	nousir	na]			
NP/NAP/ NVP						voltage,				1000011	'9,								
SNP		The comb	ination	s indic	cated w	vith $ullet$ in the	above	table a	re avai	lable.									
CHB/G																			
MXB/G																			
Other valves																			
SWD/ MWD																			
DustColl																			
CVE/ CVSE																			
CCH/																			
CPE/D LifeSci	[Example of model No.] AG31-02-1-H3AASZ-	DC24V																	
Gas-	Model : AG31 A Port size	: Rc1/4																	
Combus Auto-	B Orifice size	: TOP-ø1.5/BO																	
Water	Body/sealant combinationCoil housing	: Body - copper : Open frame le	-				r	4		reca	ution	ne fo	r mo	nde	IN		وصار	acti	ion
Outdoor	Manual override (locking)					U -		=	_			13 10	i inc	Jue	1 I N	<u> </u>	2010	-01	

Notes for O

*1 : NO valve seal of AG34 and AG44 is fluoro rubber.

 $^{\ast}2$: Do not use fluid containing oil with ethylene propylene rubber, since it is not oil-resistant.

Ending

344

SpecFld

Custom

CKD

Voltage

GSurge suppressor

: None

: 24 VDC

: With surge suppressor

EXA

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

DC	D Coil housing							FWD					
Desc	cription			Manual override (Locking)	Mounting plate		ble gla e cable		Conduit		With surge suppressor	Description	HNB/G
DCS	лраон			Manual (Mounti	A-15a	A-15b	A-15c	CTC19	G1/2	With suppr	Description	USB/G
3A 3M		Lead wire (IP65 HP terminal I	. ,						G	Н		12 VDC, 24 VDC, 48 VDC, 100 VDC	FAB/G
3N	iname i	HP terminal box wi	ith lamp (G1/2)	Α	в	D	Е	F			S	12 VDC, 24 VDC, 100 VDC	FGB/G
3I 3J		HP terminal box (IP65 or e HP term.box w/ lamp (IP6	1 / (/									12 VDC, 24 VDC, 48 VDC, 100 VDC 12 VDC, 24 VDC, 100 VDC	FVB
5A 5M	Open	Lead wire (IP65 HP terminal I							G	н			FWB/G
5N	(aloae	HP terminal box w	ith lamp (G1/2)	Α	в	D	Е	F				100 VAC, 200 VAC	FHB
5l 5J	(integrated)	HP terminal box (IP65 or e HP term.box w/ lamp (IP	1 / (/										FLB
												\mathbf{A} Refer to the following cautions for \mathbf{D} to \mathbf{O} .	AB
			Open frame										AG
3A 5A			Lead wire 30 5A (diode inte		D				G H			$ \begin{array}{c} \bullet \text{Conduit} \\ \bullet \text{G}(\text{CTC19}) \\ \bullet \text{H}(\text{G1/2}) \end{array} $	AP/ AD
					/								APK/ ADK
3M 3N	The I		Open frame I	HP tern	ninal bo	хс							DryAir
5M 5N			5M, 5N (diod										EX- XPLNprf
													XPLNprf
3I 3J 5I			Open frame I (IP65 or equi	ivalent)		х							HVB/ HVL
5J			5I, 5J (diode	integra	ted)								S∜B/ NAB
	Def	ior to nog	- 000										LAD/ NAD

Refer to page 330 for coil selection.

A Precautions for model No. selection

Notes for **D**

*3 : Coils for 5A/5M/5N/5I/5J have a diode to convert AC to DC voltage Voltage of less than 100 VAC is not available.

Notes for G to G

- *4 : For ^(G), select an option from D, E, F, 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.
 *7 : Tropicalization (rust-proof coating) is available as a measure against rust.Contact CKD for more information.
- Note that tropicalization is not available when the manual override option (A) is selected.

Notes for **①**

- *8 : 100 VAC coil is compatible with 100 VAC 50/60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz.
- *9 : For voltages other than above, contact CKD.
- *10 : The lead wire is available in the standard 300 mm length, and 500 mm, 1000 mm, 2000 mm and 3000 mm lengths. Contact CKD for more information.
- Gas-Combus Auto-Water Outdoor SpecFld

Water-Rela

NP/NAP/ NVP SNP

CHB/G

MXB/G

Other valves

SWD/ MWD

DustColl

CVE/ CVSE

CCH/

CPE/D

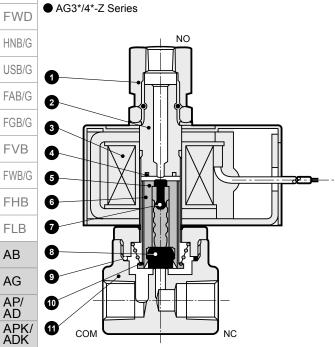
LifeSci

Custom

Ending

CKD

EXA Internal structure and parts list



No.	Part name	Material	
1	Socket	C3604(SUS303)	Copper alloy (stainless steel)
2	Core assembly	SUS405 or equiv.316/403 *1	Stainless steel
3	Coil assembly	-	-
4	Shading coil	Cu (Ag for SUS body)	Copper (silver for stainless steel body)
5	Plunger	SUS405 or equiv.	Stainless steel
6	Plunger tube	PET	Polyethylene terephthalate
7	NO valve sealant		NBR: Nitrile rubber
8	NC valve sealant		'(FKM: Fluoro rubber) '(EPDM: Ethylene propylene
9	O-ring		rubber)
10	Plunger spring	SUS304	Stainless steel
11	Body	C3771(SUS303)	Copper alloy (stainless steel)

*1 : When the body/sealant combination code is other than H, the material is SUS405 or equivalent/316L/430.

*2 : () shows options.

 \star3 : For AG34 and AG44 with body/sealant combination code H/L, NO valve seal is FKM.

The figure shows AG31/33/34.

S ◊ B/ NAB Dimensions CAD LAD/ NAD • Open frame lead wire

DryAir

EX-XPLNprf

XPLNprf HVB/ HVL

Water-Rela NP/NAP/ NVP SNP

CHB/G MXB/G Other valves

SWD/ MWD

DustColl

CVE/ CVSE

CCH/ CPE/D

LifeSci Gas-Combus

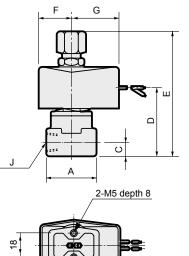
Auto-Water

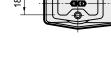
Outdoor SpecFld

Custom

Ending

Open frame I			
AG3*/4*-*-*-	Н	3A	****Z
	IJ	5A	
	Р		



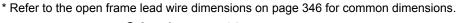


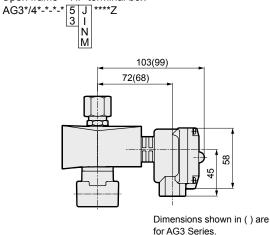
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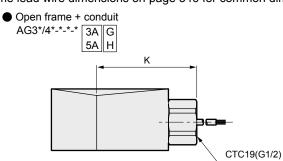
Model No.	Α	В	С	D	Е	F	G	н	J
AG3*- 01 02-*****Z	36	28	11	50.5	94	24	38	38	Rc1/8 Rc1/4
AG4*-02-1 to 5-*****Z	36	28	11	52	99.5	28	42	46	Rc1/4
AG4*-03-1 to 5-*****Z	40	28	12	55	106	28	42	46	Rc3/8

CKD

CAD **Optional dimensions** Open frame + HP terminal box



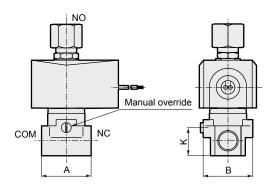




Dimensions shown in () are for G1/2.

Model No.	к
AG3*	53(56)
AG4*	57(60)

Manual override (locking) AG3*/4*-*-** A ***Z (The figure shows copper alloy body.)



Α	В	K
36	38(ø37.5)	19.5
36	38(ø37.5)	19.5
40	40(ø45)	22.5
	36 36	36 38(ø37.5) 36 38(ø37.5)

Dimensions shown in () are for stainless steel body.

Mounting plate model	Compatibility	Gas
AG3-GE-100106- MOUNT-PLATE-KIT (Mounting plate No.1)	● All of AG3* Series	Au
AG4-GE-100106-	Copper alloy body AG4*-02/03-1 to 5- H/J/P	Out
MOUNT-PLATE-KIT (Mounting plate No.1)	● Stainless steel body AG4*-02-1 to 5- L/M/R	Spe
AG4-GE-100159- MOUNT-PLATE-KIT (Mounting plate No.2)	● Stainless steel body AG4*-03-1 to 5- L/M/R	Cus
	<u>l</u>	Enc

* Material: Steel/Zinc plated

HNB/G USB/G FAB/G FGB/G **FVB** FWB/G FHB FLB AB AG AP/ AD APK/ ADK DryAir EX-XPLNprf XPLNprf HVB/ HVL S≎B/ NAB LAD/ NAD Water-Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CPE/D LifeSci mbus utoater utdoor

EXA

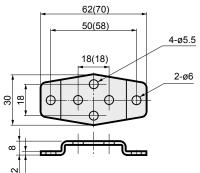
FWD

ecFld

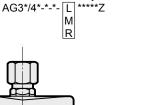
istom

Ending

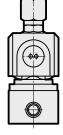
 Mounting plate AG3*/4*-*-*-***B**Z



Dimensions shown in () are for mounting plate No. 2.

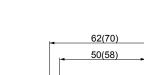


Stainless steel body



Model No.	А	С
AG3*- 01 -1 to 2-*****Z	ø37.5	11
AG4*-02-1 to 5-*****Z	ø37.5	11
AG4*-03-1 to 5-*****Z	ø45	12

()





EXA

USB/G FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

AB

AG

• GAG352/452-Z

NO port

NO

Direct acting 3-port solenoid valve for dry air, manifold/actuator General purpose

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

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



Manifold circuit configuration Common specifications • GAG31*/41*-Z

(Common supply/separate flow)

A port NO port A port

сом

NON

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar Item Standard specifications (Common supply/individual exhaust) Working fluid For dry air (atmospheric dew point -60°C and over)/inert gas/low vacuum [1.33 x 10² Pa (abs)] Working pressure differential MPa 0 to 1 (refer to max. working pressure differential in individual specifications.) Max. working pressure MPa 1 (≈150 psi, 10 bar) Proof pressure (water pressure) MPa 10 (≈1500 psi, 100 bar) Fluid temperature °C -10 (14°F) to 45 (113°F) (no freezing) °C Ambient temperature -10 (14°F) to 45 (113°F) Thermal class Class 130 (B) Atmosphere Place free of corrosive gas and explosive gas Valve structure Direct acting poppet structure Valve seat leakage cm³/min(ANR) 0.2 or less Mounting orientation Unrestricted

Individual specifications

Item	NO port	Orifice	size (mm)	Max. working pressure	Rated	Power consu	mption (V
Model No.	Port size	ТОР	BODY	differential (MPa)	voltage	AC50/60 Hz	DC
GAG311-1-Z	Rc1/8	1.5	1.5	0.7 (≈100 psi, 7 bar)	100 VAC		
351-2-Z	RC1/0	2.0	2.0	0.4 (≈58 psi, 4 bar)	50/60 Hz		
GAG312-1-Z	Rc1/4	1.5	1.5	0.7 (≈100 psi, 7 bar)	200 VAC		
352 <u>-2-Z</u>	RC1/4	2.0	2.0	0.4 (≈58 psi, 4 bar)	50/60 Hz	17	14
GAG412-1-Z	Rc1/4	2.0	2.0	0.65 (≈94 psi, 6.5 bar)			14
452 <u>-2-Z</u>	RC1/4	2.3	2.3	0.4 (≈58 psi, 4 bar)	12 VDC		
GAG413-1-Z	Rc3/8	2.0	2.0	0.65 (≈94 psi, 6.5 bar)	24 VDC 48 VDC		
453-2-Z	KC3/8	2.3	2.3	0.4 (≈58 psi, 4 bar)	100 VDC		

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

*2 : For A and C port sizes, refer to How to order (page 350) and dimensions (pages 204 to 207). *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 the values shown below.

: current	Voltage Model No. GAG34*-*****Z GAG45*-****Z	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
kage	GAG34*-****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
Lea	GAG45*-****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

Weight

/Vater														
	Model No.	Weight (kg)												
Dutdoor	Wodel No.	Actuator only	2 stations	3 stations	4 stations	5 stations	6 stations	7 stations	8 stations	9 stations	10 stations			
pecFld	GAG35*-*-*-H3AZ	0.45	1.6	2.3	3.2	3.7	4.6	5.3	6.0	7.0	7.4			
	GAG452-*-*-H3AZ	0.51	1.8	2.7	3.6	4.3	5.4	6.1	7.0	8.1	8.6			
Custom	GAG453-*-*-H3AZ	0.52	1.8	2.7	3.6	4.4	5.4	6.2	7.1	8.2	8.7			



GAG31*/35*/41*/45*-Z Series

Flow characteristics

		Orifice s	ize (mm)		Flow characteristics				
Model No.	Port size	ТОР	BODY	C[dm³/(s·bar)]			b		
			БОЛТ	TOP	BODY	TOP	BODY		
GAG311 -1-Z	Rc1/8	1.5	1.5	0.29	0.29	0.64	0.53		
351 -2-Z	- RC1/6	2.0	2.0	0.53	0.53	0.54	0.52		
GAG312 -1-Z		1.5	1.5	0.29	0.29	0.64	0.53		
352 -2-Z	- KC1/4	2.0	2.0	0.53	0.53	0.54	0.52		
GAG412 -1-Z		2.0	2.0	0.53	0.53	0.54	0.52		
452 -2-Z	- RC1/4	2.3	2.3	0.74	0.74	0.66	0.53		
GAG413 -1-Z	Rc3/8	2.0	2.0	0.53	0.53	0.54	0.52		
453 -2-Z	- RC3/0	2.3	2.3	0.74	0.74	0.66	0.53		

*1 : Effective cross-sectional area S and sonic conductance C are converted as S ≈ 5.0 x C.

Internal structure and parts list

The same as AG3*/4*-Z Series. Refer to page 346.

Dimensions

The same as the open frame of GAG31/35/41/45 Series. Refer to pages 204 to 207.

EXA FWD HNB/G USB/G FAB/G FGB/G FVB FWB/G FHB FLB AB AG AP/ AD APK/ ADK DryAir EX-XPLNprf XPLNprf HVB/ HVL S☆B/ NAB LAD/ NAD Water-Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CPE/D LifeSci Gas-Combus Auto-Water Outdoor SpecFld Custom Ending

GAG31*/35*/41*/45*-Z Series

EXA	How to order								
FWD	Common supply/individua	l exhaust (port C pre	essurizati	on)					
HNB/G	GAG31 1 - 1		jA A		- AC100V				
	Common supply/separate flow (port C pressurization)	Coil ho	ousing 🕕 With s	urge suppre	ssor			
USB/G	GAG35 1			anual override (loc		ed voltage			
FAB/G	Common supply/individual exhaus	t (port C pressurization)	-	Other option	IS				
FGB/G	GAG41 2							Mode	el No.
FVB	Common supply/separate flow	(port C pressurization)						GAG3**	GAG4**
FWB/G	GAG45 2		Code	port size	De	escription			
FHB	Model No. NO port size	e	1 2	1/8 1/4				•	
FLB			3	3/8			-		•
			BThre	ead					
AB	B Thread	d l	Blank	Rc					
AG			G N	G NPT				•	•
AP/				ice size			:		
AD APK/		Orifice size		GAG	3**	GA	G4**		
ADK				ТОР	BODY	ТОР	BODY		
DryAir			1 2	ø1.5 ø2.0	ø1.5 ø2.0	ø2.0 ø2.3	ø2.0 ø2.3	•	•
EX- XPLNprf			D Man	nifold station N	0.				
XPLNprf	*2	lanifold station No.	2 to	2 stations to				•	•
HVB/ HVL			10 0	10 stations Actuator only					•
S≎B/			-	y/sealant com	hination		:		
NAB		Body/sealant	Bou	Body Se		Treatment	Remarks		
LAD/ NAD		combination	Н	୍ଥି Nitrile rubb			_		●
Water-	[Example of model No.	-	J P	Fluoro rubl		-	_	•	•
Rela NP/NAP/	GAG311-1-4-H5AZ-A		 			Oil-prohibited		•	•
NVP	Model : GAG311 (common su exhaust, port C pressurizatio		М	部 Nitrile rubb 部 Fluoro rubl			_	•	●
SNP	A NO port size : 1/8	,	R	. 풍 Ethylene prop	ylene rubber		_		●
CHB/G	B Thread : Rc		Re	efer to Intro Pa	age 39 fo	r reference on	material cor	nbinatio	ns.
MXB/G	C Orifice size : TOF D Manifold station No. : 4 sta	P-ø1.5, BODY-ø1.5 ations	🕞 to 🕽						
Other	Body/sealant combination	y - copper alloy,	Refe	er to page 35	1 for deta	ils on the coil h	ousing, othe	er optior	is and
valves		ant - nitrile rubber		age, etc.			0,	•	
SWD/ MWD		n frame de integrated) lead	The combi	inations indicated w	ith ● in the at	oove table are availabl	е.		
DustColl	wire	for AC voltage							
CVE/	G to C : Non Rated voltage : 200	e VAC 50/60 Hz							
CVSE CCH/									
CPE/D LifeSci	[Example of model No. GAG352N-2-7-H3AA	SZ-DC24V							
Gas-	Model : GAG352 (common si		port C p	ressurization)					
Combus	A NO port size B Thread :	: 1/4 NPT							
Auto- Water	Orifice size	: TOP-ø2.0, BODY	-ø2.0			Precautions	s for mode	No se	election
Outdoor	Manifold station No.Body/sealant combination	: 7 stations : Body - copper allo	oy, sealar	nt - nitrile rubber		: Orders for only the n	nasking plate and		
SpecFld	Coil housingManual override (locking)	: Open frame lead	wire for D	C voltage		available. Contact C	KD for details.		
Custom	Other options	: None				otes for D to D	fold station No., co	ontact CKD.	
	Surge suppressorRated voltage	: With surge suppre : 24 VDC	:5501		*3	: Do not use fluid cont since it is not oil-resi	-	ylene propy	lene rubber,
Ending									
35	o CKD								

GAG31*/35*/41*/45*-Z Series

	oil hous	sing		G	HC	Other	optio	ns			J Rated voltage	FW			
						ble gl			nduit	ge sor		HNE			
scr	ription			Manual override (Locking)	<u> </u>		1	1	it piping)	With surge suppressor	Description				
				Mai ove (Lo	A-15a	A-15t	A-15c			Wit sup		USE			
		Lead wire (HP termi	IP65 or equivalent) inal box (G1/2)			1	1	G	<u> </u> H		12 VDC, 24 VDC, 48 VDC, 100 VDC	FAB			
-	trame	-	pox with lamp (G1/2)	Α	D	Е	F			S	12 VDC, 24 VDC, 100 VDC	FGB			
_		HP term box HP term.box w/ la	, . ,								12 VDC, 24 VDC, 48 VDC, 100 VDC 12 VDC, 24 VDC, 100 VDC	FV			
ļ	Open	Lead wire (IP65 or equivalent)			1	1	G	Н			FWE			
-1	frame	HP termi HP terminal b	(-)	Α			_				100 VAC, 200 VAC				
	(diode integrated)	HP term box	(IP65, equiv) (G1/2)		D	E	F					FH			
		HP term.box w/ la	mp (IP65 equiv.) (G1/2)						Ť.		A Refer to the following cautions for (F) to (J) .	FLI			
												AB			
T	run	-										AG			
		0	 Open frame Lead wire 3 5A (diode in 	800 mm					G [H [Conduit G(CTC19)	AP			
		5	● 5A (diode ir	negrated)						- (● H(G1/2)	AD AP			
I]					AD			
	The state		● Open frame ● 5M, 5N (dio									Dry			
			• oni, or (uic		/							EX- XPLI			
Γ]					XPL			
	The I		 Open frame (IP65 or eq 		box										
			• 5I, 5J (diod									HV S≎			
Ļ															
	Ref	er to p	age 330									LA NA			
		-	age 330									LA NA Wa Rel			
		-	age 330 election.									LA NA Wat Rela			
		-	•									LA NA Rela NP/N NVP			
		-	•						A P	recaut	ions for model No. selection	LA NA Reli NP/N NVP			
		-	•								ions for model No. selection	LA NA Wai Reli NP/N NVP SN			
		-	•						• Not	es for Is for 5A/5N	M/5N/5I/5J have a diode to convert AC to DC voltage.	LA NA Wat Rela NP/N NVP SN - CHE MXE			
		-	•						*4 : Coi Notes	es for Is for 5A/5 for () to (M/5N/5I/5J have a diode to convert AC to DC voltage.	LA NA Rel NP/N NVP SN CHE MXE Oth valv			
		-	•						*4 : Coi Notes *5 : For *6 : The	es for ls for 5A/5M for () to Item (+), so surge sup	M/5N/5I/5J have a diode to convert AC to DC voltage.	LA NA Rel NP/N NVP SN CHE Oth valv			
		-	•						*4 : Coi Notes *5 : For *6 : The sele in th	es for Is for 5A/5M for () to (Item (), s e surge sup ecting a coin ne terminal	M/5N/5I/5J have a diode to convert AC to DC voltage. elect an option from D, E, F, G and H. pressor is attached with the lead wire coil. When il with a terminal box, the surge suppressor is mounted box.	LANA Wa Rel NP/N NVP SN CHE MXI Oth valv SW MV			
		-	•						*4 : Coi Notes *5 : For *6 : The sele in tt *7 : Sur *8 : Tro	es for ls for 5A/5N for ① to 0 Item ④, su esting a coin the terminal ge suppress picalization	M/5N/5I/5J have a diode to convert AC to DC voltage. elect an option from D, E, F, G and H. opressor is attached with the lead wire coil. When il with a terminal box, the surge suppressor is mounted box. essor is incorporated as standard in the coil with diode. In (rust-proof coating) is available as a measure against	LA NA Wat Rela NP/N NVP SN SN CHE Oth valv SW MV Dust CV			
		-	•						*4 : Coi Notes *5 : For *6 : The sele in th *7 : Sur *8 : Troj rust Not	es for Is for 5A/50 for to to to Item (P), so escring a coi ecting a coi ne terminal ge supprese picalization c. Contact (C e that tropi	W/5N/5I/5J have a diode to convert AC to DC voltage. elect an option from D, E, F, G and H. ppressor is attached with the lead wire coil. When il with a terminal box, the surge suppressor is mounted box. ssor is incorporated as standard in the coil with diode. In (rust-proof coating) is available as a measure against CKD for more information. icalization is not available when the manual override	LANA Wa Rel NP/NNP SN CHE MXR Oth valv SW MV Dust CV CV CV CC			
		-	•						*4 : Coi Notes *5 : For *6 : The sele in th *7 : Sur *8 : Troj rust Not opti	es for Is for 5A/51 for to to Item (P), si e surge sup excing a coin acting	W/5N/5I/5J have a diode to convert AC to DC voltage. elect an option from D, E, F, G and H. ppressor is attached with the lead wire coil. When il with a terminal box, the surge suppressor is mounted box. ssor is incorporated as standard in the coil with diode. In (rust-proof coating) is available as a measure against CKD for more information. icalization is not available when the manual override	LANA Wa Rel NP/N NVP SN SN SN MXI Oth valv SW MV Dust CV CV CV CCC CCP			
		-	•						*4 : Coi Notes *5 : For *6 : The sele in th *7 : Sur *8 : Troj rust Not opti Notes *9 : 100	es for Is for 5A/50 for to to Item (P), si e surge sup e surge sup e contact of e that tropi on (A) is si for () VAC coil is	W/5N/5I/5J have a diode to convert AC to DC voltage. elect an option from D, E, F, G and H. ppressor is attached with the lead wire coil. When il with a terminal box, the surge suppressor is mounted box. ssor is incorporated as standard in the coil with diode. In (rust-proof coating) is available as a measure against CKD for more information. icalization is not available when the manual override elected. s compatible with 100 VAC 50/60 Hz, and 200 VAC coil	LANA Wa Rel NP/N NVP SN CHE MXR Oth valv SW MV Dust CV CV CV CV CV CV CV CV CV CV CV CV CV			
		-	•						*4 : Coi Notes *5 : For *6 : The sele in tt *7 : Sur *8 : Troy rust Not opti Notes *9 : 100 is c *10 : For	es for Is for 5A/5M for to (Item (P), si e surge sup- ecting a coi he terminal ge supprese- picalization Contact (C e that tropi on (A) is se for () VAC coil is ompatible voltages o	W/5N/5I/5J have a diode to convert AC to DC voltage. elect an option from D, E, F, G and H. ppressor is attached with the lead wire coil. When il with a terminal box, the surge suppressor is mounted box. ssor is incorporated as standard in the coil with diode. (rust-proof coating) is available as a measure against CKD for more information. icalization is not available when the manual override elected. s compatible with 100 VAC 50/60 Hz, and 200 VAC coil with 200 VAC 50/60 Hz. ther than above, contact CKD.	LANA Wai Relation NP/N NVP SN MXE Oth valv SW MXE Oth valv SW MV Dust CV CV CV CV CV CV CV CV CV CV CV CV CV			
		-	•						*4 : Coi Notes *5 : For *6 : The sele in tt *7 : Sur *8 : Troy rust Notes *9 : 1000 is c *10 : For *11 : The	es for Is for 5A/5M for ① to 0 Item ①, so es urge sup- ecting a coi- ne terminal ge suppres- picalization c. Contact O on (A) is so for ① VAC coil is ompatible ov voltages o e lead wire	W/5N/5I/5J have a diode to convert AC to DC voltage. elect an option from D, E, F, G and H. ppressor is attached with the lead wire coil. When il with a terminal box, the surge suppressor is mounted box. ssor is incorporated as standard in the coil with diode. In (rust-proof coating) is available as a measure against CKD for more information. icalization is not available when the manual override elected. s compatible with 100 VAC 50/60 Hz, and 200 VAC coil with 200 VAC 50/60 Hz.	CHE MXE Oth valv SW MV Dustr CVI CVS CCH CPE Lifes Gas- Com			

Custom Ending



Direct acting 3-port solenoid valve for dry air, manifold/actuator General purpose



• Common supply/individual exhaust

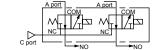


1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

JIS symbol ● GAG33*/GAG43*-Z

EXA

(Common supply/individual exhaust)



Common specifications

Item		Standard specifications
Working fluid		For dry air (atmospheric dew point -60°C and over)/inert gas/low vacuum [1.33 x 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 (≈150 psi, 10 bar)
Proof pressure (water pressure)	MPa	10 (≈1500 psi, 100 bar)
Fluid temperature	°C	-10 (14°F) to 45 (113°F) (no freezing)
Ambient temperature	°C	-10 (14°F) to 45 (113°F)
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	Orifice s	ize (mm)	Max. working pressure	Rated	Power consumption (W)	
Model No.	size	ТОР	BODY	differential (MPa)	voltage	AC50/60 Hz	DC
GAG331-1-Z	Rc1/8	1.5	1.5	1.0 (≈150 psi, 10 bar)	100 VAC		
-2-Z	- KC1/0	2.0	2.0	0.7 (≈100 psi, 7 bar)	50/60 Hz	17	
r- GAG332-1-Z	Rc1/4	1.5	1.5	1.0 (≈150 psi, 10 bar)	200 VAC 50/60 Hz		
-2-Z	- RC1/4	2.0	2.0	0.7 (≈100 psi, 7 bar)			14
GAG432-4-Z	Rc1/4	3.0	3.0	0.7 (≈100 psi, 7 bar)			14
-5-Z	- KU1/4	3.5	3.0	0.4 (≈58 psi, 4 bar)	12 VDC		
GAG433-4-Z	Rc3/8	3.0	3.0	0.7 (≈100 psi, 7 bar)	24 VDC 48 VDC		
G -5-Z	RU3/0	3.5	3.0	0.4 (≈58 psi, 4 bar)	100 VDC		

*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 : For A and C port sizes, refer to How to order (page 354) and dimensions (pages 222 to 225).

*3 : The voltage fluctuation range must be ±10% of the rated voltage. *4 : The leakage current must be less than the values shown below.

*4 : The leakage current must be less than the values shown*5 : When using at low vacuum, vacuum the NO port side.

current	Voltage Model No. GAG33*-****Z GAG43*-****Z	100 VAC	200 VAC	12 VDC	24 VDC	48 VDC	100 VDC
kage	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
Lea	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

Outdoor Weight

	0												
SpecFld	Model No.	Weight (kg)											
speci iu	woder no.	Actuator only	2 stations	3 stations	4 stations	5 stations	6 stations	7 stations	8 stations	9 stations	10 stations		
Custom	GAG33*-*-*-H3AZ	0.45	1.6	2.3	3.2	3.7	4.6	5.3	6.0	7.0	7.4		
	GAG432-*-*-H3AZ	0.51	1.8	2.7	3.6	4.3	5.4	6.1	7.0	8.1	8.6		
Ending	GAG433-*-*-H3AZ	0.52	1.8	2.7	3.6	4.4	5.4	6.2	7.1	8.2	8.7		



GAG33*/GAG43*-Z Series

Flow characteristics

		Orifice s	ize (mm)	Flow characteristics					
Model No.	Port size	ТОР	BODY	C[dm ³ /	/(s·bar)]	b			
		IUP	BODT	TOP	BODY	TOP	BODY		
GAG331-1-Z	De1/9	1.5	1.5	0.29	0.29	0.64	0.53		
-2-Z	— Rc1/8	2.0	2.0	0.53	0.53	0.54	0.52		
GAG332-1-Z	D-1/4	1.5	1.5	0.29	0.29	0.64	0.53		
-2-Z	— Rc1/4	2.0	2.0	0.53	0.53	0.54	0.52		
GAG432-4-Z	Rc1/4	3.0	3.0	1.1	1.1	0.72	0.52		
-5-Z	- RC1/4	3.5	3.0	1.5	1.1	0.62	0.52		
GAG433-4-Z	Rc3/8	3.0	3.0	1.1	1.1	0.72	0.52		
-5-Z	KC3/8	3.5	3.0	1.5	1.1	0.62	0.52		

*1 : Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \text{ x C}$.

Internal structure and parts list

The same as AG3*/4*-Z Series. Refer to page 346.

Dimensions

The same as the open frame of GAG33/43 Series. Refer to pages 222 to 225.

	EXA
	FWD
	HNB/G
	USB/G
	FAB/G
	FGB/G
	FVB
	FWB/G
	FHB
	FLB
	AB
	AG
•	AP/ AD
	AD APK/ ADK
	DryAir
	EX- XPLNprf
	XPLNprf XPLNprf
	HVB/
	HVL S≎B/
	NAB LAD/
	NAD
	Water- Rela
	NP/NAP/ NVP
	SNP
	CHB/G
	MXB/G
	Other valves
	SWD/ MWD
	DustColl
	CVE/ CVSE
	CCH/ CPE/D
	LifeSci
	Gas- Combus
	Auto- Water
	Outdoor
	SpecFld
	Custom
	Ending
3	53

GAG33*/GAG43*-Z Series

EXA	How to order							
	• Common supply/individual exhaust (port C press	surization)						
FWD HNB/G	GAG33 1 - 2 - 6 - H 5A	\checkmark	\sim	C100V				
USB/G	GAG43		ng ① With surg	[``				
		1	al override (lockin	g) J Rated vo	bitage			
FAB/G		G	Other options				Mode	el No.
FGB/G	Model No.						GAG33*	GAG43*
FVB		Code		Des	scription			
FWB/G	A NO port size		O port size					
FHB		2	1/4				•	
FLB		3	3/8					•
FLD	B Thread	B Th Blank	nread					
AB		G	G				•	•
AG		Ν	NPT					•
AP/	Orifice size	- C O	rifice size	0.0.0.*		0.40*		
AD APK/			GA TOP	G33* BODY	GA TOP	AG43* BODY		
ADK		1	ø1.5	ø1.5	-	-	•	
DryAir		2	ø2.0	ø2.0	-	-	•	
EX- XPLNprf		4 5	-	-	ø3.0 ø3.5	ø3.0 ø3.0		•
XPLNprf	Manifold		anifold statio	n No.				
HVB/	*2 station No.	2 to	2 stations to					
HVL		10	10 stations				•	
S≎B/		0	Actuator only					
NAB		-						
NAB LAD/	Body/seala	nt B	ody/sealant c					
LAD/ NAD	Body/seala combination		Body S	Seal	Treatment	Remarks		
LAD/ NAD Water- Rela	[Example of model No. 1]	nt	Body S Nitrile ru	bber		Remarks —	•	•
LAD/ NAD Water- Rela NP/NAP/	combination	nt H J pn) P	Body S Nitrile ru	bber ubber ropylene rubber		Remarks 	•	•
LAD/ NAD Water- Rela NP/NAP/ NVP	(Example of model No. 1) GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8	nt H J n) P	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Ethylene pu Image: Second structure Nitrile ru	Seal bber bber ubber ropylene rubber bber	Treatment	Remarks 	•	• • • •
LAD/ NAD Water- Rela NP/NAP/ NVP SNP	Combination [Example of model No. 1] *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc	nt H J pn) P	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Second structure Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Fluoro ru	Seal bber bber ubber ropylene rubber bber	Treatment	Remarks 	•	-
LAD/ NAD Water- Rela NP/NAP/ NVP	Combination (Example of model No. 1) GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations	nt H J P L M R	Body S Image: Second stress of the sec	Seal bber bber opylene rubber bber ubber opylene rubber	Treatment Oil-prohibited		• • • •	•
LAD/ NAD Water- Rela NP/NAP/ NVP SNP	Combination (Example of model No. 1) GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 B Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination	nt H J P L M R Re	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Nitrile ru Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure	Seal bber bber opylene rubber bber ubber opylene rubber	Treatment		• • • •	•
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other	Combination *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization A NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination : Body - copper alloy, sealant - nitrile rubber	nt H J P L M R R E to	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Second structure Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structur	Seal bber ubber opylene rubber bber ubber opylene rubber Page 39 for	Treatment Oil-prohibited		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves	Combination *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization A NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination : Body - copper alloy, sealant - nitrile rubber Coil housing : Open frame	H J P L M R F to Ref	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Nitrile ru Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other	Combination *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization A NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination : Body - copper alloy, sealant - nitrile rubber	H J P L M R F to Ref	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Second structure Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structur	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/	 combination [Example of model No. 1] GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination Body/sealant combination Body - copper alloy, sealant - nitrile rubber Coil housing : Open frame (diode integrated) lead wire for AC voltage to ① : None 	H J P L M R R R e and	Body S Body S Nitrile ru Fluoro ru Ethylene pi S Fluoro ru Fluoro ru Fluoro ru Ethylene pi Ethylene pi Fluoro ru Ethylene pi Fluoro ru Fluoro ru Ethylene pi Fluoro ru Fluoro ru Ethylene pi Fluoro ru Ethylene pi Fluoro ru For to Intro F Fluoro ru J For to page 3 d voltage, etc Fluoro ru	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/	 combination *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination Body/sealant combination Body/sealant combination Coil housing : Open frame (diode integrated) lead wird for AC voltage To Coil housing : None Rated voltage : 200 VAC 50/60 Hz 	H J P L M R R R e and	Body S Body S Nitrile ru Fluoro ru Ethylene pi S Fluoro ru Fluoro ru Fluoro ru Ethylene pi Ethylene pi Fluoro ru Ethylene pi Fluoro ru Fluoro ru Ethylene pi Fluoro ru Fluoro ru Ethylene pi Fluoro ru Ethylene pi Fluoro ru For to Intro F Fluoro ru J For to page 3 d voltage, etc Fluoro ru	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited r reference o ails on the co		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/	 combination *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination	H J P L M R R R e and	Body S Body S Nitrile ru Fluoro ru Ethylene pi S Fluoro ru Fluoro ru Fluoro ru Ethylene pi Ethylene pi Fluoro ru Ethylene pi Fluoro ru Fluoro ru Ethylene pi Fluoro ru Fluoro ru Ethylene pi Fluoro ru Ethylene pi Fluoro ru For to Intro F Fluoro ru J For to page 3 d voltage, etc Fluoro ru	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited r reference o ails on the co		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/	 combination *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination Body/sealant combination Body/sealant combination Coil housing : Open frame (diode integrated) lead wird for AC voltage To Coil housing : None Rated voltage : 200 VAC 50/60 Hz 	nt H J P L M R R R C F to Ref and	Body S Image: Strain	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited r reference o ails on the co		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/	 combination *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization A NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination Body - copper alloy, sealant - nitrile rubber F Coil housing : Open frame (diode integrated) lead wire for AC voltage to Xone Rated voltage : 200 VAC 50/60 Hz [Example of model No. 2] GAG332G-2-7-H3AASZ-DC24V Model : GAG332 (common supply/individual exhaut NO port size : 1/4 	nt H J P L M R R R C F to Ref and	Body S Image: Strain	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited r reference o ails on the co		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CVSE CCH/ CPE/D LifeSci Gas-	 combination *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination Body/sealant combination Body - copper alloy, sealant - nitrile rubber Coil housing : Open frame (diode integrated) lead wire for AC voltage to	nt H J P L M R R R C The con	Body S Image: Strain	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited r reference o ails on the co		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CPE/D LifeSci Gas- Combus Auto-	 combination [Example of model No. 1] GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination	nt H J P L M R R C F to R c A C The con	Body S Image: Strain	Seal bber ubber opylene rubber ubber opylene rubber Page 39 for 355 for deta	Treatment Oil-prohibited r reference o ails on the co		• • • • • •	• • ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CVSE CCH/ CPE/D LifeSci Gas- Combus	 combination [Example of model No. 1] GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination Body - copper alloy, sealant - nitrile rubber F Coil housing : Open frame (diode integrated) lead wire for AC voltage to 1 : None Rated voltage : 200 VAC 50/60 Hz [Example of model No. 2] GAG332G-2-7-H3AASZ-DC24V Model : GAG332 (common supply/individual exhaut NO port size : 1/4 Thread : G Orifice size : TOP-ø2.0, BODY-ø2 Manifold station No. : 7 stations Body/sealant combination: Body - copper alloy, 	nt H J P L M R R R C The con st, port C .0 sealant - r	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Nitrile ru Image: Second structure Fluoro ru	Seal bber ubber opylene rubber bber opylene rubber Page 39 for 055 for deta C. ed with ● in the	Treatment Oil-prohibited r reference o ails on the co	 on material c	other opt	ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CPE/D LifeSci Gas- Combus Auto-	<pre>combination *3 [Example of model No. 1] *3 GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization NO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination</pre>	nt H J P L M R R R C The con st, port C .0 sealant - r	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Nitrile ru Image: Second structure Fluoro ru	Seal bber ubber ropylene rubber bber page 39 for 2 age 39 for 555 for deta c. ad with ● in the F *1 : Or	Treatment Oil-prohibited r reference of ails on the co above table are av Precautions ders for only the m		No. se	ions.
LAD/ NAD Water- Rela NP/NAP/ NVP CHB/G MXB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CVSE CCH/ CPE/D LifeSci Gas- combus Auto- Water-	<pre>combination *3 [Example of model No. 1] GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization ANO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body/sealant combination Body/sealant combination Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing : Open frame (diode integrated) lead wire for AC voltage Coll housing Coll hou</pre>	nt H J P L M R R R C The con St, port C .0 sealant - r e for DC v	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Nitrile ru Image: Second structure Fluoro ru	Seal bber ubber ropylene rubber bber page 39 for 255 for deta c. ed with ● in the *1 : Or av	Treatment Oil-prohibited r reference of ails on the co above table are av Precautions ders for only the m ailable. Contact CM		No. se	ions.
LAD/ NAD Water- Rela NP/NAP/ NVP SNP CHB/G Other valves SWD/ MWD DustColl CVE/ CVSE CCH/ CVSE CCH/ CPE/D LifeSci Gas- Combus Auto- Water	<pre>combination *3 [Example of model No. 1] GAG331-1-4-H5AZ-AC200V Model : GAG331 (common supply/individual exhaust, port C pressurization ANO port size : 1/8 Thread : Rc Orifice size : TOP-ø1.5, BODY-ø1.5 Manifold station No.: 4 stations Body / copper alloy, sealant - nitrile rubber Coil housing : Open frame (diode integrated) lead wire for AC voltage Cot O : None Rated voltage : 200 VAC 50/60 Hz [Example of model No. 2] GAG332G-2-7-H3AASZ-DC24V Model : GAG332 (common supply/individual exhau NO port size : 1/4 Thread : G Orifice size : TOP-ø2.0, BODY-ø2 Manifold station No. : 7 stations Body/sealant combination: Body - copper alloy, Coil housing : Open frame Manual override (locking) : Selected Other options : None</pre>	nt H J P L M R R R C The con St, port C .0 sealant - r e for DC v	Body S Image: Second structure Nitrile ru Image: Second structure Fluoro ru Image: Second structure Nitrile ru Image: Second structure Fluoro ru	Seal bber ubber opylene rubber bber opylene rubber Page 39 for 055 for deta C. bd with ● in the *1 : Or av Notes *2 : Fo	Treatment Oil-prohibited r reference of ails on the co above table are av Precautions ders for only the m		No. se	ions. tions

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CKD

GAG33*/GAG43*-Z Series

FC	oil hou	sing	G	HC	Other	optio	ns			J Rated voltage	F١
) ()		e gland		Conduit) (conduit piping)		surge		HN
Des	cription		Manual override (Locking)		1	<u> </u>		G1/2		Description	
3A	Lead wire (IP65 or equiva				I	I	G	н	<u>> </u>	12 VDC, 24 VDC, 48 VDC, 100 VDC	FA
BM BN	Open	With HP terminal box (G1/2) HP terminal box with lamp (G1/2)	-						s	12 VDC, 24 VDC, 100 VDC	FG
31	frame	HP terminal box (IP65 or equivalent) (G1/2)	-	D	E	F			3	12 VDC, 24 VDC, 100 VDC	
J	-	HP term box, lamp (IP65, equiv) (G1/2)	-							12 VDC, 24 VDC, 100 VDC	F
δA	Onon	Lead wire (IP65 or equivalent)	-		ı		G	Н		· · · · ·	F۷
М	Open frame	With HP terminal box (G1/2)								400,400,000,400	
5N 51	(diode	HP terminal box with lamp (G1/2) HP terminal box (IP65 or equivalent) (G1/2)	-	D	Е	F				100 VAC, 200 VAC	F
J	integrated)	HP term box, lamp (IP65, equiv) (G1/2)	-								F
								ÆF	Refer to	the following cautions for Items $(\ensuremath{\mathbb{F}})$ to (J).	A
											A
BA		Open frame Lead wire 30)0 mm					G	1.5	Conduit G(CTC19)	A
5A		■ 5A (diode int						н		$\bigcirc \Theta = \Theta(G(1/2))$	A
	<u> </u>										A
SM SN	The second	● Open frame	HP terminal h	OX							D
5M 5N		• 5M, 5N (diod		UK							ΕX
											XF
											XF
SI SJ	in the second	Open frame (IP65 or equ		ох							H
i J		● 51, 5J (diode	,								F
-		-									N
											L

Refer to page 330 for coil selection.

A Precautions for model No. selection

Notes for Item (

*4 : Coils for 5A/5M/5N/5I/5J have a diode to convert AC to DC voltage.

Notes for Items () to

- *5 : For Item (H), select an option from D, E, F, G and H.
- *6 : 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.
- *7 : Surge suppressor is incorporated as standard in the coil with diode.
 *8 : Tropicalization (rust-proof coating) is available as a measure against rust. Contact CKD for more information.

Note that tropicalization is not available when the manual override option (A) is selected.

Notes for Item

- *9 : 100 VAC coil is compatible with 100 VAC 50/60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz.
- *10 : For voltages other than above, contact CKD.
- *11 : The lead wire is available in the standard 300 mm length, and 500mm, 1000 mm, 2000 mm and 3000 mm lengths. Contact CKD for more information.

SpecFld

Water-Rela

NP/NAP/ NVP

CHB/G

MXB/G

Other

valves

SWD/ MWD

DustColl

CVE/

CVSE

CCH/

CPE/D

LifeSci

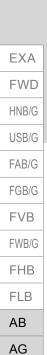
Gas-Combus

Auto-Water

Outdoor

Custom

Ending



AP/ AD

APK/ ADK

DryAir EX-XPLNprf XPLNprf

valves



Direct acting 3-port solenoid valve for dry air, actuator General purpose

GAG34*/GAG44*-Z Series

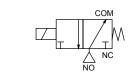


Common specifications



1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

JIS symbol • GAG34*/44*-Z : NO pressurization



Item	Standard specifications
Working fluid	For dry air (atmospheric dew point -60°C and over)/inert gas/low vacuum [1.33 x 10 ² Pa (abs)]
Working pressure differential MF	a 0 to 1 (refer to max. working pressure differential in individual specifications.)
Max. working pressure MP	a 1.5 (≈220 psi, 15 bar)
Proof pressure (water pressure) MF	a 10 (≈1500 psi, 100 bar)
Fluid temperature °	C -10 (14°F) to 45 (113°F) (no freezing)
Ambient temperature °	C -10 (14°F) to 45 (113°F)
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(ANI	R) 0.2 or less
Mounting orientation	Unrestricted

Individual specifications

HVB/	Individual spec	cifications							
HVL	Item	Port size	Orifice s	ize (mm)	Max. working pressure	Rated	Power consumption (W)		Weight
S∜B/ NAB	Model No.	Fort Size	ТОР	BODY	differential (MPa)	voltage	AC50/60 Hz	DC	(kg)
LAD/	GAG341-1-Z	Rc1/8	1.5	1.5	1.0 (≈150 psi, 10 bar)	100 VAC			
NAD	-2-Z	KC1/0	2.0	2.0	0.45 (≈65 psi, 4.5 bar)	50/60 Hz			0.45
Water-	GAG342-1-Z	Rc1/4	1.5	1.5	1.0 (≈150 psi, 10 bar)				0.45
Rela NP/NAP/	-2-Z	KC1/4	2.0	2.0 2.0 0.45 (≈65 psi, 4.5 ba					
NVP	GAG442-1-Z		2.0	2.0	0.75 (≈110 psi, 7.5 bar)	200 VAC 50/60 Hz	17	14	
SNP	-3-Z	Rc1/4	2.0	3.0	0.7 (≈100 psi, 7 bar)	00/00 112	17	14	0.51
5111	-4-Z		3.0	3.0	0.25 (≈36 psi, 2.5 bar)				
CHB/G	GAG443-1-Z		2.0	2.0	0.75 (≈110 psi, 7.5 bar)	12 VDC 24 VDC			
	-3-Z	Rc3/8	2.0	3.0	0.7 (≈100 psi, 7 bar)	48 VDC 100 VDC			0.52
MXB/G	-4-Z		3.0	3.0	0.25 (≈36 psi, 2.5 bar)				
Other	*1 · The model numbers	above are for the h	asic NO nort size	(Rc) and orifice	size Refer to How to order for	other combinat	ions		

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

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

*4 : When using at low vacuum, vacuum the NC port side.

.								
'		Voltage	100 VAC	200 VAC		24 VDC	48 VDC	100 VDC
Ξ) cur	Model No.		200 VAC		24 000	40 000	
	kage		6 mA or less	3 mA or less	40 mA or less	20 mA or less	10 mA or less	5 mA or less
)	Lea	GAG44*-*****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

GAG34/GAG44*-Z Series

Flow characteristics

		Orifice s	ize (mm)	Flow characteristics					
Model No.	Port size	TOD	BODY	C[dm ³ /	/(s·bar)]	b			
		ТОР	BODT	TOP	BODY	TOP	BODY		
GAG341 -1-Z	De1/9	1.5	1.5	0.29	0.29	0.64	0.53		
-2-Z	Rc1/8	2.0	2.0	0.53	0.53	0.54	0.52		
GAG342 -1-Z	Rc1/4	1.5	1.5	0.29	0.29	0.64	0.53		
-2-Z		2.0	2.0	0.53	0.53	0.54	0.52		
GAG442 -1-Z		2.0	2.0	0.53	0.53	0.54	0.52		
-3-Z	Rc1/4	2.0	3.0	0.53	1.1	0.54	0.52		
-4-Z		3.0	3.0	1.1	1.1	0.72	0.52		
GAG443 -1-Z		2.0	2.0	0.53	0.53	0.54	0.52		
-3-Z	Rc3/8	2.0	3.0	0.53	1.1	0.54	0.52		
-4-Z		3.0	3.0	1.1	1.1	0.72	0.52		

*1 : Effective cross-sectional area S and sonic conductance C are converted as S \approx 5.0 x C.

Internal structure and parts list

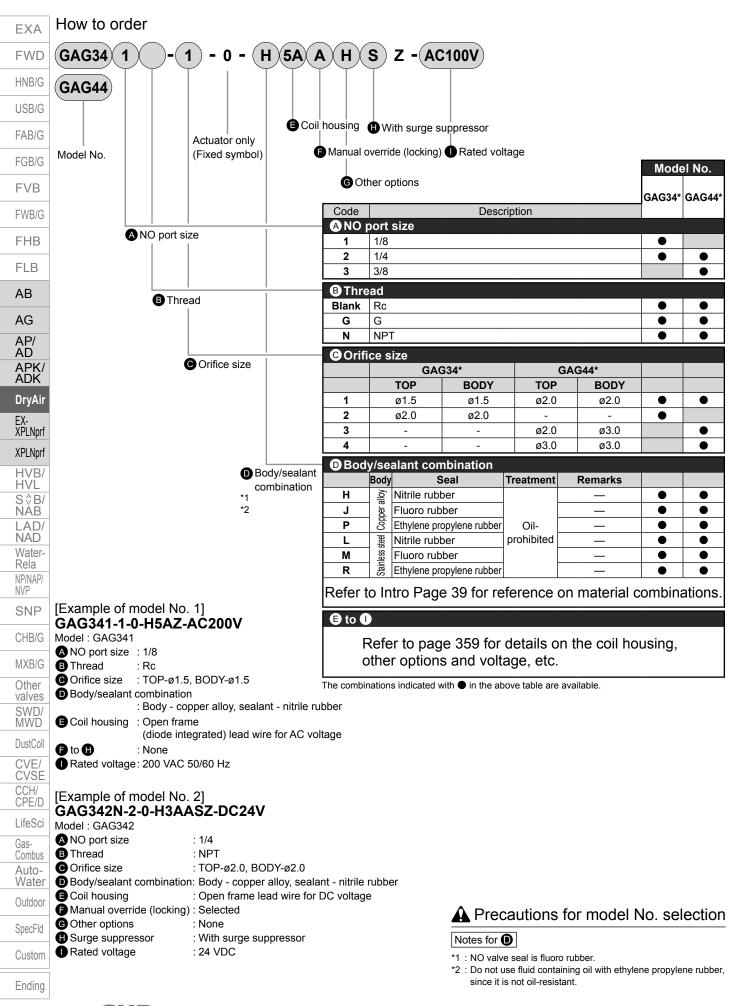
The same as AG3*/4*-Z Series. Refer to page 346.

Dimensions

The same as the open frame of GAG34/44 Series. Refer to pages 238 to 241.

9	
	EXA
	FWD
	HNB/G
	USB/G
	FAB/G
	FGB/G
	FVB
	FWB/G
	FHB
	FLB
	AB
	AG
	AP/ AD
	APK/ ADK
	DryAir
-	EX- XPLNprf
	XPLNprf
	HVB/ HVL
	S∜B/ NAB
	LAD/ NAD
-	Water- Rela
	NP/NAP/ NVP
	SNP
	CHB/G
	MXB/G
	Other valves
	SWD/ MWD
	DustColl
	CVE/ CVSE CCH/
	CCH/ CPE/D
	LifeSci
	Gas- Combus
	Auto- Water
	Outdoor
	SpecFld
	Custom
	Ending
3	57

GAG34/GAG44*-Z Series



⁸ CKD

GAG34/GAG44*-Z Series

			combinations in ems (F) to (H) a							ank			EXA
	oil hou							optio			H	Rated voltage	FWD
Dee				9 9	uc ing)		e glanc e cable		Cond (condu	duit uit piping	urge	Description	HNB/G
Des	cription			Manual	(Locking)	A-15a	A-15b	A-15c	CTC19	G1/2	With surge suppressor	Description	USB/G
3A 3M	-	Lead wire (I With HP ter	P65 or equivalent) minal box (G1/2)				1	T	G	н		12 VDC, 24 VDC, 48 VDC, 100 VDC	FAB/G
3N	Open frame	n HP terminal box with lamp (G1/2)		1	•	D	Е	F			s	12 VDC, 24 VDC, 100 VDC	FGB/G
3I 3J	-											12 VDC, 24 VDC, 48 VDC, 100 VDC 12 VDC, 24 VDC, 100 VDC	FVB
5A 5M	Open	, · · · · · · · · · · · · · · · · · · ·	IP65 or equivalent) rminal box (G1/2)			1	1	G	Н	-		FWB/G	
5N	frame (diode	HP terminal box with lamp (G1/		4	A		Е	F				100 VAC, 200 VAC	FHB
51 5J	integrated)	HP terminal box (IP HP term box, lan											FLB
										ÆF	Refer to	the following cautions for Items $\textcircled{\mbox{\rm E}}$ to $\textcircled{\mbox{\rm I}}.$	AB
			Open frame									● Conduit	AG
3A 5A		0	 Open frame Lead wire 30 ● 5A (diode inte 		,				G H			$\bigcirc \bigcirc $	AP/ AD
		\sim			/								APK/ ADK
3M 3N			Open frame I	HP term	inal bo	x							DryAir
5M 5N			• 5M, 5N (diod										EX- XPLNprf
	I		[XPLNprf
3I 3J 5I	31 3J (IP65 or equivalent)												HVB/ HVL
5J			● 5I, 5J (diode	integrat	ed)								S≎B/ NAB
													LAD/ NAD
	Ret	fer to p	age 330 fo	r coil									Water-

Refer to page 330 for coil selection.

A Precautions for model No. selection

Notes for Item 🕒

*3 : Coils for 5A/5M/5N/5I/5J have a diode to convert AC to DC voltage.

Notes for Items 🕒 to 🔒

- *4 : For Item (G), select an option from D, E, F, 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.
 *7 : Tropicalization (rust-proof coating) is available as a measure against rust. Contact CKD for more information.
 Note that tropicalization is not available when the manual override option (A) is selected.

Notes for Item

- *8 : 100 VAC coil is compatible with 100 VAC 50/60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz.
- *9 : For voltages other than above, contact CKD.
- *10 : The lead wire is available in the standard 300 mm length, and 500mm, 1000 mm, 2000 mm and 3000 mm lengths. Contact CKD for more information.
- SpecFld Custom

Rela

NP/NAP/ NVP

CHB/G

MXB/G

Other

valves

SWD/ MWD

DustColl

CVE/

CVSE

CPE/D

LifeSci

Gas-Combus

Auto-Water

Outdoor

CCH/

Ending