



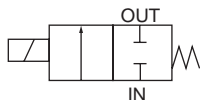
Direct acting 2-port solenoid valve, single unit
General purpose

AB41-W Series

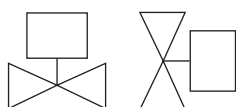
- NC (Open when energized)
- Port size: Rc1/4 to Rc1/2



JIS symbol



Mounting orientation



Common specifications

Item	Standard specifications
Working fluid	Air/Low vacuum ($1.33 \times 10^2 \text{Pa(absolute)}$)/Water/Kerosene/Oil (50mm ² /s or less *1)
Working pressure differential MPa	0 to 5 (refer to max. working pressure differential in individual specifications.)
Proof pressure (water) MPa	10 (burst pressure: 25 or more)
Fluid temperature °C	Nitrile rubber(D): -20 to 60 (no freezing) Fluoro rubber(E): -10 to 60 (no freezing)
Ambient temperature °C	Nitrile rubber(D): -20 to 60, fluoro rubber(E): -10 to 60
Thermal class	Class 130 (B)
Working environment	Indoors/outdoors
Atmosphere	A place free of corrosive gases, liquids, chemicals, and explosive gases
Valve structure	Direct acting poppet structure
Valve seat leakage cm ³ /min(ANR)	0.2 or less (air)
Mounting orientation	Usable in a range of vertical to horizontal orientation with the coil on top
Degree of protection	IP65

*1: Dynamic viscosity varies depending on temperature. Check that the dynamic viscosity is 50 mm²/s or less within the temperature range being used. When exceeding 50 mm²/s, operation will become unstable.

Individual specifications

Item	Port size	Orifice size (mm)	Max. working pressure differential (MPa)			Max. Working pressure (MPa)	Rated voltage	Apparent power(VA)		Power consumption(W)		Weigh (kg)		
			Air	Water/hot water/kerosene	Oil (50mm²/s)			When holding		When starting			AC 50/60Hz	
Model No.			AC	AC	AC			50Hz	60Hz	50Hz	60Hz			
NC (open when energized)														
AB41- ⁰² ₀₃	-1	Rc1/4 Rc3/8	1.5	5.0	4.5	4.0	5	100 VAC 50/60Hz *5	18	15	29	24	6.7/5.7	0.8 (Rc1/4)
	-2		2.0	3.0	2.7	2.5								
	-3		3.0	1.5	1.3	0.9								
	-4		3.5	1.2	0.9	0.6								0.95 (Rc3/8)
	-5		4.0	1.0	0.7	0.5								
	-6		5.0	0.6	0.4	0.25								
	-7		7.0	0.25	0.2	0.15								
AB41- ⁰³ ₀₄	-8	Rc3/8 Rc1/2	10.0	0.1	0.1	0.05							1.15	

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

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

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

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

*5: 100 VAC (50/60 Hz) can also be used with 110 VAC (60 Hz). The 200 VAC (50/60 Hz) type can be used with 220 VAC (60 Hz).

Flow characteristics

Model No.	Port size	Orifice size (mm)	Flow characteristics		
			C[dm ³ /(s·bar)]	b	Cv
NC (open when energized)					
AB41- ⁰¹ ₀₂ -1	Rc 1/4 Rc 3/8	1.5	0.29	0.53	0.1
		2.0	0.53	0.52	0.15
		3.0	1.1	0.52	0.31
		3.5	1.5	0.47	0.40
		4.0	1.9	0.47	0.48
		5.0	2.6	0.38	0.62
		7.0	4.6	0.37	0.82
AB41- ⁰³ ₀₄ -8	Rc 3/8 Rc 1/2	10.0	8.1	0.31	1.5

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

How to order

● NC (normally closed)

AB41 - 02 - 3 - D 3E B D S W - AC100V

Model No. A Port size B Orifice size C Body sealant Material combination D Coil housing E Mounting plate F Other options G With surge suppressor H Warranty period I Rated voltage

Model No.					
AB41	AB41 Low pressure Large flow rate				
Code					
A Port size					
02	Rc1/4	●			
03	Rc3/8	●	●		
04	Rc1/2		●		
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	Remarks		
D	Stainless	Nitrile rubber *5	air/water/low vacuum/kerosene/oil	●	●
E	steel	Fluoro rubber *5	air/water/low vacuum/kerosene/oil	●	●
D to I					
Refer to the following table for details on the coil housing, other options, voltage, etc.					
H Warranty period					
W	1 year after delivery				
WG	3 years after delivery *3, *4 (with inspection certificate, inspection guidelines, traceability system diagram)				

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

[Example of model No. 1]

AB41-02-3-E3EWG-AC100V

Model: AB41

- A Port size : Rc1/4
- B Orifice size : ø3
- C Body/sealant combination : Body - stainless steel, sealant - fluoro rubber
- D Coil housing : Open frame with round terminal box
- E to G : None
- H Warranty period : 3 years after delivery
- I Rated voltage : 100 VAC 50/60 Hz, 110 VAC 60 Hz

For Items ④ to ⑩, the combinations indicated with codes are available.

However, ⑤ to ⑩ If an option for Item is not required, this item should be left blank.

D Coil housing			E	F Other options			G	I Rated voltage
Description			Mounting plate	Cable gland			With surge suppressor	Description
				(marine cable gland)				
				A-15a	A-15b	A-15c		
3E	Open	With round terminal box (G1/2)	B	D	E	F	S	100 VAC, 200 VAC
3L	Frame type	Round terminal box with lamp(G1/2)						

⚠ Refer to the following cautions for Items ③ to ⑩.

⚠ Precautions for model No. selection

Notes for Items ③ to ⑩

- *1: For Item ⑥, select an option from D, E and F.
- *2: The surge suppressor is mounted in the terminal box.
- *3: The warranty period of option WG is guaranteed for a period of three years from the date of delivery or for a period of one year from the start of use, whichever comes first. Refer to page 101 for details.
- *4: For option WG, the specifications and drawings must be exchanged.
- *5: For option D, the ambient temperature is -20°C to 60°C. For option E, the ambient temperature is -10°C to 60°C.

Notes for Item ⑩

- *6: 100 VAC coil is compatible with 100 VAC 50/60 Hz and 110 VAC 60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz and 220 VAC 60 Hz.

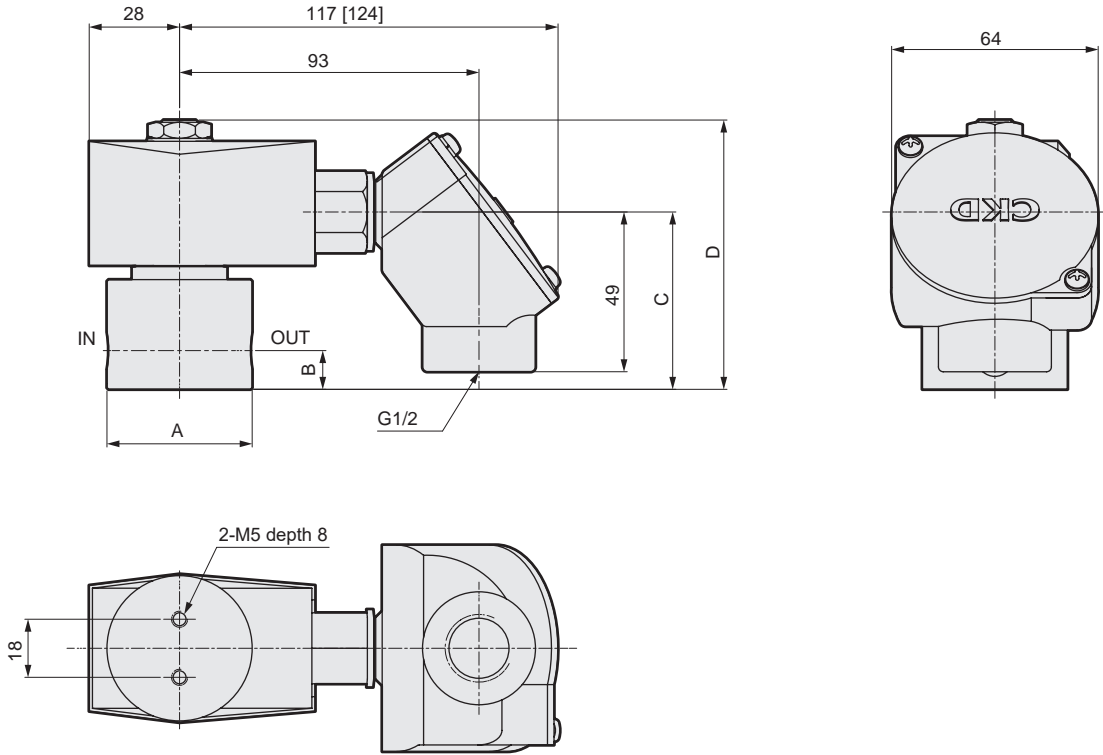
Dimensions: AB41-W Series



● Open frame + round terminal box

AB41-**-**
3E
3L

[] is for AB41-**-**-**3L type



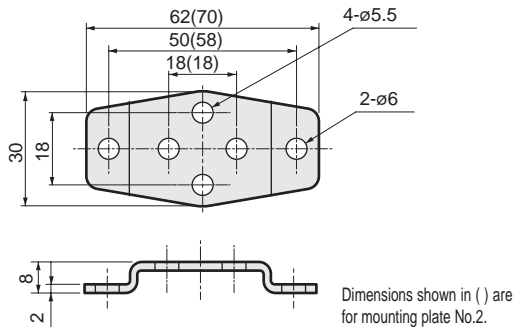
Model No.	A	B	C	D
AB41, 41-02-1to 6	ø37.5	11	52	80.5
AB41, 41-02-7 -03-1 to 7	ø45	12	55	83.5
AB41, 41-03-8 -04-8	ø50 *1	15	64	93

*1: The max. dimension is ø54.

Option dimensions: AB41-W Series



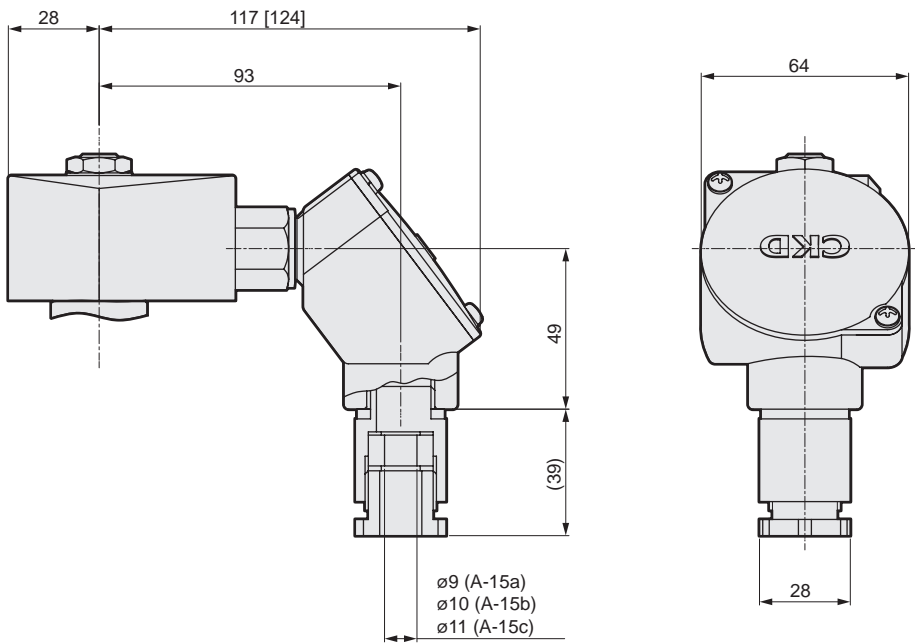
- Mounting plate
AB41-**-****B**



Mounting plate model No.	Compatibility
AB4-W-GE-100106-MOUNT-PLATE-KIT (Mounting plate No.1)	AB41-02-1 to 6
AB4-W-GE-100159-MOUNT-PLATE-KIT (Mounting plate No.2)	AB41-02-7 AB41-03-1 to 8 AB41-04-8

- Cable gland
AB41-**-****3E** **D**
3L **E**
F

[] is for AB41-**-****3L** type



Drain separator
F.R.L. unit

Pneumatic auxiliary
components

Pneumatic
valves

Fluid control
valves

Pneumatic
cylinders

Related
products

Safety
precautions



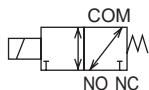
Direct acting 3-port solenoid valve, single unit
General purpose

AG41-W Series

- Universal
- Port size: Rc1/4, Rc3/8



JIS symbol



Mounting orientation



Common specifications

Item	Standard specifications	
Working fluid	Air/low vacuum ($1.33 \times 10^2 \text{ Pa(abs)}$)/Water/kerosene/oil (50 mm ² /s or less *1)	
Working pressure differential MPa	0 to 1 (refer to max. working pressure differential in individual specifications.)	
Max. working pressure MPa	1	
Proof pressure (water) MPa	2 (burst pressure: 25 or more)	
Working temperature °C	Nitrile rubber (D): -20 to 60 (no freezing) Fluoro rubber (E): -10 to 60 (no freezing)	
Ambient temperature °C	Nitrile rubber (D): -20 to 60, fluoro rubber (E): -10 to 60	
Thermal class	Class 130 (B)	
Working environment	Indoors/outdoors	
Atmosphere	A place free of corrosive gases, liquids, chemicals, and explosive gases	
Valve structure	Direct acting poppet structure	
Valve seat leakage cm ³ /min(ANR)	0.2 or less (in air)	
Mounting orientation	Usable in a range of vertical to horizontal orientation with the coil on top	
Degree of protection	IP65	

*1: Dynamic viscosity varies depending on temperature. Check that the dynamic viscosity is 50 mm²/s or less within the temperature range being used. When exceeding 50 mm²/s, operation will become unstable.

Individual specifications

Item	Connection Bore size	Orifice size (mm)		Max. working pressure differential (MPa)			Rated voltage	Apparent power(VA)				Power consumption(W)	kg
				Air	Water/hot water/kerosene	Oil(50 mm ² /s)		When holding		When starting		AC	
Model No.		TOP	BODY	AC	AC	AC		50Hz	60Hz	50Hz	60Hz	50/60Hz	
AG41-02-1	Rc1/4	2.0	2.0	1.0	1.0	0.4	100 VAC 50/60Hz *4 200 VAC 50/60Hz *4	22	17	35	27	8.3/6.2	0.85
-02-2		2.3	2.3	0.7	0.7	0.25							
-03-1	Rc3/8	2.0	2.0	1.0	1.0	0.4							1.0
-03-2		2.3	2.3	0.7	0.7	0.25							

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

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

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

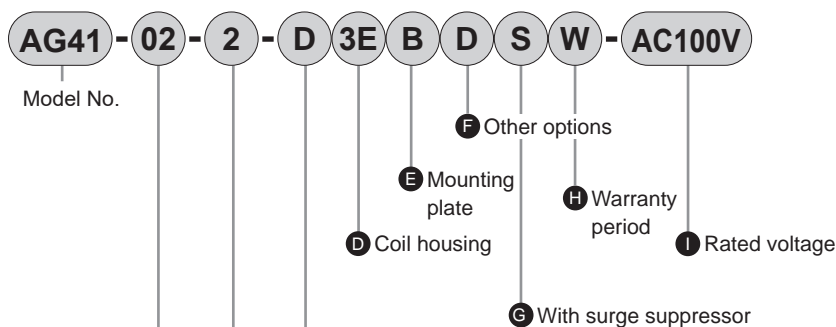
*4: 100 VAC (50/60 Hz) can also be used with 110 VAC (60 Hz). The 200 VAC (50/60 Hz) type can be used with 220 VAC (60 Hz).

Flow characteristics

Model No.	Port size	Orifice size(mm)		Flow characteristics					
		TOP	BODY	C[dm ³ /(s·bar)]		b		Cv	
				TOP	BODY	TOP	BODY	TOP	BODY
AG41-02-1	Rc 1/4	2.0	2.0	0.53	0.53	0.54	0.52	0.15	0.15
-02-2		2.3	2.3	0.74	0.74	0.66	0.53	0.19	0.19
-03-1	Rc 3/8	2.0	2.0	0.53	0.53	0.54	0.52	0.15	0.15
-03-2		2.3	2.3	0.74	0.74	0.66	0.53	0.19	0.19

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

How to order



[Example of model No.]

AG41-03-2-E3EWG-AC100V

Model: AG41

- A** Port size : Rc3/8
- B** Orifice size : TOP-ø2.3, BODY-ø2.3
- C** Body/sealant combination : Body - stainless steel, sealant - fluoro rubber
- D** Coil housing: Open frame with round terminal box
- E** to **G** : None
- H** Warranty period : 3 years after delivery
- I** Rated voltage : 100 VAC 50/60Hz, 110 VAC 60Hz

Code	Description
A Port size	
02	Rc1/4
03	Rc3/8
B Orifice size	
	TOP
1	ø2.0
2	ø2.3
C Body/sealant combination	
	Body
D	Stainless
E	steel
	Seal
	Nitrile rubber
	Fluoro rubber
	Remarks
	*5 air/water/low vacuum/kerosene/oil
	*5 air/water/low vacuum/kerosene/oil
D to I	
Refer to the following table for details on the coil housing, other options, voltage, etc.	
H Warranty period	
W	1 year after delivery
WG	3 years after delivery *3, *4 (with inspection certificate, inspection guidelines, traceability system diagram)

For Item **D** to **I**, the combinations indicated with codes are available.
Note that if options for Items **E** to **G** are not required, it should be blank.

D Coil housing			E	F Other options			G	I Rated voltage
Description			Mounting plate	Cable gland			With surge suppressor	Description
				(marine cable gland)				
				A-15a	A-15b	A-15c		
3E	Open	With round terminal box (G1/2)	B	D	E	F	S	100 VAC, 200 VAC
3L	Frame type	Round terminal box with lamp (G1/2)						

Refer to the following cautions for Items **C** to **I**.

Precautions for model No. selection

Notes for Items **C** to **H**

- *1: For Item **E**, select an option from D, E and F.
- *2: The surge suppressor is mounted in the terminal box.
- *3: The warranty period of option WG is guaranteed for a period of three years from the date of delivery or for a period of one year from the start of use, whichever comes first.
- *4: For option WG, the specifications and drawings must be exchanged. Refer to page 101 for details.
- *5: For option D, the ambient temperature is -20°C to 60°C. For option E, the ambient temperature is -10°C to 60°C.

Notes for Item **I**

- *6: 100 VAC coil is compatible with 100 VAC 50/60 Hz and 110 VAC 60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz and 220 VAC 60 Hz.

Dimensions: AG41-W Series

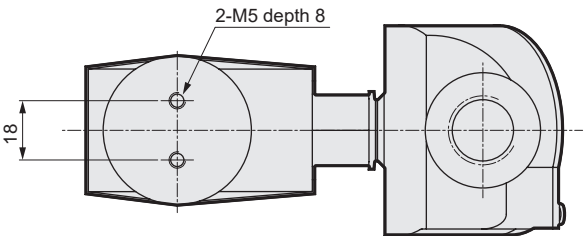
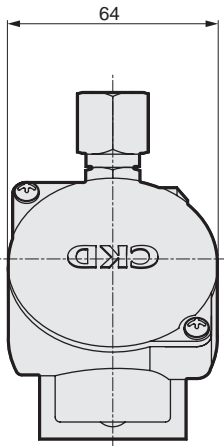
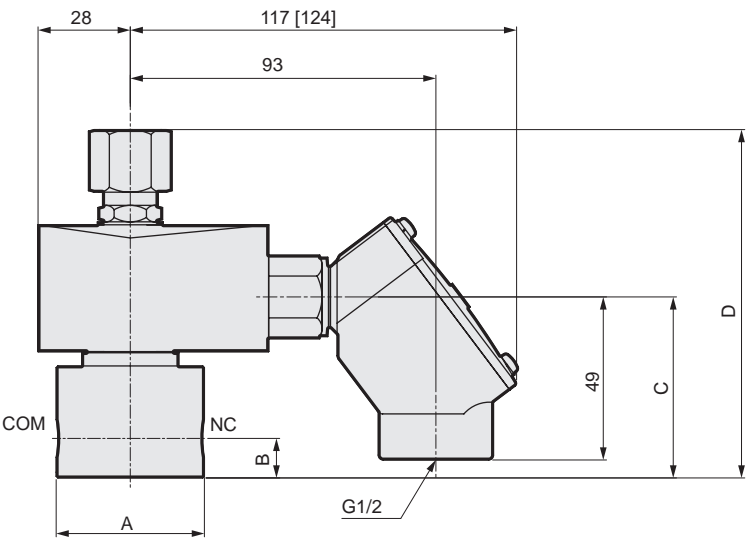


● Open frame + round terminal box

AG41-**-**
3E
3L

[] is for AG41-**-**-3L type

[Reference]As the JIS symbol flow shows, pressure can be applied from any of the three piping ports. Generally, two orifices (TOP, BODY) have the same value and rated pressure.
When not energized: COM → NO or NO → COM
When energized : COM → NC or NC → COM

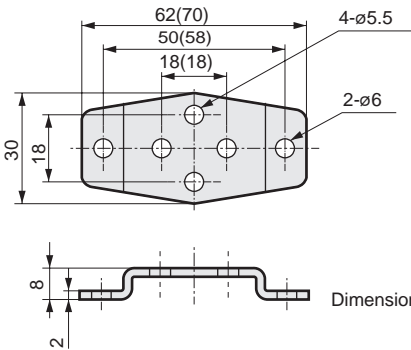


Model No.	A	B	C	D
AG41-02-1 to 2	ø37.5	11	52	99.5
AG41-03-1 to 2	ø45	12	55	106

Option Dimensions: AG41-W Series



- Mounting plate
AG41-**-*[B]

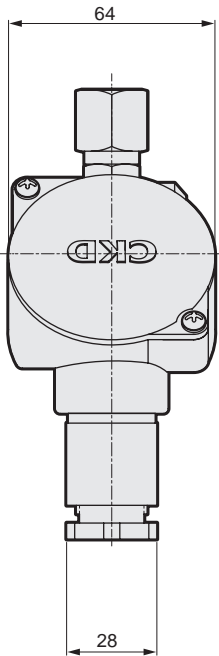
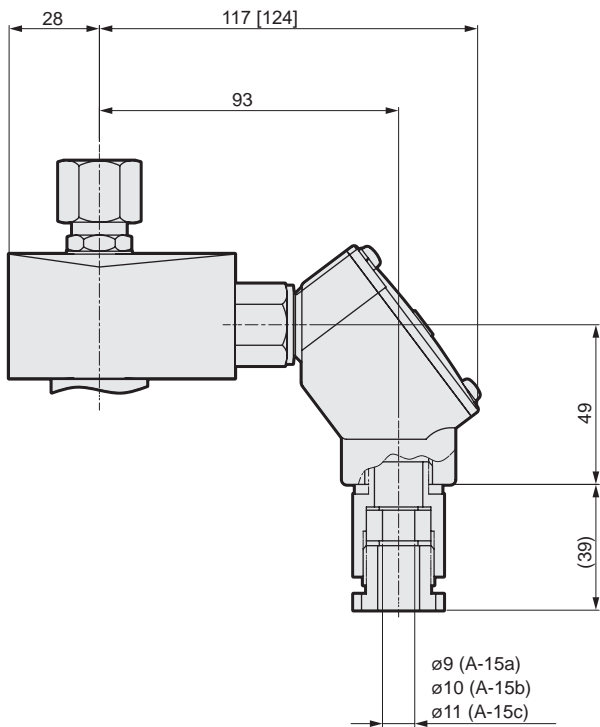


Dimensions shown in () are for mounting plate No. 2.

Mounting plate model No.	Compatibility
AG4-W-GE-100106-MOUNT-PLATE-KIT (mounting plate No.1)	AG41-02-1 to 2
AG4-W-GE-100159-MOUNT-PLATE-KIT (mounting plate No.2)	AG41-03-1 to 2

- Cable gland
AG41-**-*[3E D 3L E F]

[] is for AG41-**-*[3L] type



Drain separator
F.R.L. unit

Pneumatic auxiliary
components

Pneumatic
valves

Fluid control
valves

Pneumatic
cylinders

Related
products

Safety
precautions