## \_\_A Series

Single Unit Ejector + With Valve + Without Energy Saving Function

Refer to pages 36, 37, 39, and 40 for the port layouts (including circuit examples) and pages 57 to 59 for the dimensions.

#### **How to Order**

Body/Exhaust type

	ouy/Exilaus	
Symbol	Body	Exhaust type
A		Silencer exhaust*1
В	Single unit	Port exhaust exhaust
G		High-noise reduction silencer exhaust

\*1 With exhaust port when 2 is 12 or 15

#### 4 Rated voltage (Supply valve/Release valve)

Symbol	Voltage
5	24 VDC
6	12 VDC

#### Pressure switch for vacuum/Pressure sensor

	Туре	Pressure range [kPa]	Specifications		
Symbol			NPN	PNP	With unit selection
		range [Ki a]	2 ou	tputs	function*4
Α			•	_	•
В	for	0 to -101	•	_	None (SI unit only)
С	Pressure switch for vacuum	0 10 - 10 1	_	•	•
D			_	•	None (SI unit only)
E	ure /acı		•	_	•
F	ISSE	-100 to 100	•	_	None (SI unit only)
Н	Pre	-100 to 100	_	•	•
J			_	•	None (SI unit only)
Р	Pressure	0 to -101	Analog output 1 to 5 V		output 1 to 5 V
Т	sensor	-100 to 100			σιιμαι τιο 5 ν
N	Without p	ressure switch for	essure switch for vacuum/pressure sensor		

\*4 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### Vacuum (V) port

_	
Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

#### 2 Nominal nozzle size\*2

Symbol	Nominal nozzle size
07	ø0.7
10	ø1.0
12	ø1.2
15	ø1.5

\*2 Refer to page 29 for the standard supply pressure per nozzle diameter.

#### 3 Combination of supply valve and release valve

Symbol	Supply valve			Release valve
	N.C.	N.O.	Self-holding	N.C.
Κ	•	_	_	•
J	•	_	_	_
R		_	●*3	•
E	_	•	_	•

\*3 Supply valve maintains vacuum by energization (20 ms or more). Stopping the vacuum turns on the release valve. Refer to the precautions on page 90.

#### 6 Connector

#### (Supply valve/Release valve/Pressure switch for vacuum)

Symbol	For supply valve/ release valve: 300 mm (Connector assembly)*5	For pressure switch for vacuum: 2 m (Lead wire with connector)	Pressure sensor assembly: 3 m (With lead wire)	Note
L	•			Cannot be selected
L1	None			when <b>5</b> is N
L2	•	No	one	Cannot be selected
L3	None	None		when <b>5</b> is P or T

\*5 For the connector length other than 300 mm, order the connector assembly on page 44 separately.

Symbol		Type	Note
Nil	Without o	ption	_
В	Mounting for single (nuts and		_
D		vidual release PD port supply (PD) port (M3)*7	Cannot be selected when 3 is J
E	se flow edle*8	Screwdriver operation type long lock nut	Cannot be selected when 3
J	√acuum release flow adjustment needle*8	Round lock nut Lock nut	is J Can be selected only for the
K	Vacut	Screwdriver operation type  Vacuum release flow adjustment needle	combination of J and K
w	With exhauntering interferent prevention	CE Exhaust interference	When J is selected for ③, instate the atmospheric release valve or vacuum release valve in the middle of the vacuum piping.

- \*6 When more than one option is selected, list the option symbols in alphabetical order. (Example -BJ)
- \*7 Use a One-touch fitting or barb fitting (M-3AU-4) for piping. (O.D.: Within Ø6.2)
- \*8 When "K," "R," or "E" is selected for 3, a vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

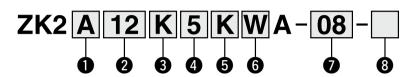
## ZK2 A Series



Single Unit Ejector + With Valve + With Energy Saving Function

Refer to page 37 for the port layout (including a circuit example) and page 60 for the dimensions.

#### **How to Order**



Body/Exhaust type

_	ouy, =xiiaac			
Symbol	Body	Exhaust type		
A		Silencer exhaust*1		
В	Single unit	Port exhaust exhaust		
G		High-noise reduction silencer exhaust		

\*1 With exhaust port when 2 is 12 or 15

#### 2 Nominal nozzle size\*2

Symbol	Nominal nozzle size
07	ø0.7
10	ø1.0
12	ø1.2
15	ø1.5

\*2 Refer to page 29 for the standard supply pressure per nozzle diameter.

### Combination of supply valve and release valve

	Cumbal	Supply	Release valve	
	Symbol	N.C.	N.O.	N.C.
	K	•	_	•
	Е	_	•	•

### 4 Rated voltage (Supply valve/Release valve)

	Symbol	Voltage	
	5	24 VDC	
	6	12 VDC	

#### **5** Pressure switch for vacuum with energy saving function

	Pressure range [kPa]	Specifications		
Symbol		NPN	PNP	With unit selection
		1 output		function*3
K	-100 to 100	•	_	•
Q		•	_	None (SI unit only)
R		_	•	•
S		_	•	None (SI unit only)

\*3 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### 6 Connector

	For pressure switch for vacuum with energy saving function: 2 m (Lead wire with connector)	
W	•	
L3	None	

#### Vacuum (V) port

Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

9	Option (For details on the Function/Application, refer to page 69.)					
Symbol	Туре			Note		
Nil	Without o	ption			_	
В		bracket for single I bolts are included		Bracket	_	
D		vidual release supply (PD) port (N	PD port VI3)* <sup>5</sup>		_	
E	ease flow needle*6	Screwdriver operation type long lock nut	on O	Screwdriver operation type long lock nut	Con he colored	
J	Vacuum release flow adjustment needle*6	Round lock nut		Lock nut	Can be selected only for the combination of J and K	
К	Vacuu	Screwdriver operation type		Vacuum release flow adjustment needle	and K	

- \*4 When more than one option is selected, list the option symbols in alphabetical order. (Example -BJ)
- \*5 Use a One-touch fitting or barb fitting (M-3AU-4) for piping. (O.D.: Within ø6.2)
- \*6 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

## ZK2 A Series

RoHS

Single Unit Ejector + With Valve + IO-Link Compatible

Refer to pages 37 and 40 for the port layouts (including circuit examples) and page 60 for the dimensions.

#### How to Order

Body/Exhaust type

=	b body/Exhladst type					
Symbol	Body	Exhaust type				
A		Silencer exhaust*1				
В	Single unit	Port exhaust exhaust				
G		High-noise reduction silencer exhaust				

\*1 With exhaust port when 2 is 12 or 15

#### 4 Rated voltage (Supply valve/Release valve)

_	
Symbol	Voltage
5	24 VDC

#### 6 Connector

Symbol	,	
	connector): 300 mm	
Н	•	
L3	None	

#### Vacuum (V) port

Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

#### 2 Nominal nozzle size\*2

	Symbol	Nominal nozzle size	
	07	ø0.7	
	10	ø1.0	
	12	ø1.2	
	15	ø1.5	

\*2 Refer to page 29 for the standard supply pressure per nozzle diameter.

#### ze\*2 **&** Co

	combination o alve and relea	
	Cupalyyolyo	Dologoo yolyo

Symbol	Supply valve		Release valve
	N.C.	N.O.	N.C.
K	•	_	•
Е	_	•	•

5 IO-Link compatible vacuum pressure switch

Cumbal	Pressure range	Specifications		
Symbol	[kPa]	Energy saving function*3	With unit selection function*4	
1	0 to -101	_	•	
2		_	None (SI unit only)	
3	-100 to 100	_	•	
4		_	None (SI unit only)	
5		•	•	
6		•	None (SI unit only)	

- \*3 In order to use the energy-saving function, 2 check valves are required. Symbols "1," "2," "3," and "4" for **3** are for a single check valve, so the energy-saving function cannot be used. Symbols "5" and "6" for **3** are equipped with 2 check valves, so the energy-saving function can be used. However, when the vacuum is stopped, workpiece release by atmospheric release cannot be used.
- \*4 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

Cumahad	_	Type		Nista		
Symbol			Note			
Nil	Without o	ption		_		
В	Mounting bracket for single unit (nuts and bolts are included)					
D	With indiv	_				
E	e flow edle*7	Screwdriver operation type long lock nut Screwdriver type long	er operation ock nut	Can be selected		
J	Vacuum release flow adjustment needle*7	Round lock nut	ock nut	only for the combination of J and K		
K	Vacut adjust	Screwdriver operation type Vacuum r flow adjus	elease stment needle	and IX		
w	With exha	chaust interference evention valve	Cannot be selected when <b>5</b> is 5 or 6			

- \*5 When more than one option is selected, list the option symbols in alphabetical order. (Example -BJ)
- \*6 Use a One-touch fitting or barb fitting (M-3AU-4) for piping. (O.D.: Within ø6.2)
- \*7 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

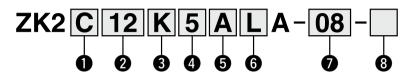
## ZK2 A Series



For Manifold Ejector + With Valve + Without Energy Saving Function

Refer to page 19 for How to Order Manifold, pages 37, 38, 40, and 41 for the port layouts (including circuit examples), and pages 62 to 64 for the dimensions.

#### **How to Order**



#### Body/Exhaust type

	bouy/Exhaust type						
Symbol	Body	Exhaust	type				
С		Complex	ect exhaust d plate naust				
F	For Manifold	Individual port exhaust	Individual port exhaust				
н			gh-noise reduction encer exhaust				

\*1 Combination of direct exhaust and end plate exhaust from each station

#### 4 Rated voltage (Supply valve/Release valve)

	<u> </u>
Symbol	Voltage
5	24 VDC
6	12 VDC

#### 5 Pressure switch for vacuum/Pressure sensor

		_		Spe	cifications
Symbol	Type	Pressure range [kPa]	NPN	PNP	With unit selection
		range [ki a]	2 ou	tputs	function*4
Α			•	_	•
В	for	0 to -101	•	_	None (SI unit only)
С	Pressure switch for vacuum	010-101	_	•	•
D	swi		_	•	None (SI unit only)
E	Jre /act		•	_	•
F	1886	-100 to 100	•	_	None (SI unit only)
Н	Pre	-100 10 100	_	•	•
J			_	•	None (SI unit only)
Р	Pressure	0 to -101	Analog output 1 to 5 V		output 1 to 5 V
Т	sensor	-100 to 100			Julpul 1 to 5 v
N	Without pressure switch for vacuum/pressure sensor				

<sup>\*4</sup> The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### Vacuum (V) port

<u> </u>	acuum (v) poi
Symbol	Vacuum (V) port
06	ø6
80	ø8
<b>07</b> Ø1/4"	
09	ø5/16"

#### 2 Nominal nozzle size\*2

Symbol	Nominal nozzle size
07	ø0.7
10	ø1.0
12	ø1.2
15	ø1.5

\*2 Refer to page 29 for the standard supply pressure per nozzle diameter.

#### 3 Combination of supply valve and release valve

	Symbol	S	Release valve		
		N.C.	N.O.	Self-holding	N.C.
	K	•	_	_	•
	J	•	_	_	_
	R	_	_	●*3	•
	Е	_	•	_	•

\*3 Supply valve maintains vacuum by energization (20 ms or more). Stopping the vacuum turns on the release valve. Refer to the precautions on page 90.

#### 6 Connector (Supply valve/Release valve/Pressure switch for vacuum)

	For supply valve/release valve			Pressure		
Symbol	Common wiring specification (Plug-in)	Individual wiring specification: 300 mm (Connector assembly)*5	switch for sensor vacuum: 2 m assembly: 3 m Lead wire with connector) (With lead wire)		Note	
С	•	None		•	Cannot be selected when <b>5</b> is N	
C1	•	None	No	one	Cannot be selected when <b>5</b> is P or T	
L	None	•			Cannot be selected	
L1	None	None			when <b>6</b> is N	
L2	None	•	No	ne	Cannot be selected	
L3	None	None	None		when <b>5</b> is P or T	

\*5 For the connector length other than 300 mm, order the connector assembly on page 44 separately.

9	puon	(For details on the	e Function/Application, refer	io page 69.)	
Symbol	Type Note				
Nil	Without o	ption		_	
E	e flow edle*7	Screwdriver operation type long lock nut	Screwdriver operation type long lock nut	Cannot be selected when 3	
J	√acuum release flow adjustment needle* <sup>7</sup>	Round lock nut	Lock nut	is J Can be selected only for the	
K	Vacuu adjust	Screwdriver operation type	Vacuum release flow adjustment needle	combination of J and K	
L		individual pecification*8	_		
Р	With manifold common release pressure supply (PD) port			Cannot be selected when 3 is J	
w	With exhaust interference prevention valve Exhaust interference prevention valve		When J is selected for <b>③</b> , install the atmospheric release valve or vacuum release valve in the middle of the vacuum piping.		

- \*6 When more than one option is selected, list the option symbols in alphabetical order. (Example -EL)
- \*7 When "K," "R," or "E" is selected for 3, a vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.
- \*8 When F or H is selected for **1** and L is selected for the option, the space for adjusting the needle is reduced. Products which can be operated more easily can be specified by option E.

## □**A** Series



For Manifold Ejector + With Valve + With Energy Saving Function

Refer to page 19 for How to Order Manifold, pages 38 and 42 for the port layouts (including circuit examples).

3 Combination of supply

N.C.

Ε

valve and release valve Supply valve

N.O.

•

Release valve

N.C. •

#### **How to Order**

#### A Rody/Evhaust type

	<b>■</b> Body/Exnaust type					
Symbol	Body	Exha	aust type			
С	For Manifold	Complex exhaust*1	End plate exhaust			
F		Individual port exhaust	Individual port exhaust			
Н		High-noise reduction silencer exhaust	High-noise reduction silencer exhaust			
*1 Combination of direct exhaust and and plate exhaust from each station						

Combination of direct exhaust and end plate exhaust from each station

#### Pressure switch for vacuum with energy saving function

1	Specifications			
Pressure range [kPa]	NPN	PNP	With unit selection	
	1 output		function*3	
-100 to 100	•	_	•	
	•	_	None (SI unit only)	
	_	•	•	
	_	•	None (SI unit only)	
		[kPa] NPN 1 ou	Pressure range [kPa] NPN PNP 1 output — — —	

\*3 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### 2 Nominal nozzle size\*2

Symbol Nominal nozzle size	
07	ø0.7
10	ø1.0
12	ø1.2
15	ø1.5

\*2 Refer to page 29 for the standard supply pressure per nozzle diameter.

#### 4 Rated voltage (Supply valve/Release valve)

Symbol	Voltage
5	24 VDC
6	12 VDC

#### 6 Connector

Symbol	For pressure switch for vacuum with energy saving function: 2 m (Lead wire with connector)
W	•
L3	None

#### Vacuum (V) port

Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

<u> </u>	Option** (For details on the Function/Application, refer to page 69.)						
Symbol	Туре					Note	
Nil	Without o	ption				_	
E	ease flow needle* <sup>5</sup>	Screwdriver operation type long lock nut		Screwdriver operation type long lock nut		Combo colocted	
J	Vacuum release flow adjustment needle* <sup>5</sup>	Round lock nut		Lock nut		Can be selected only for the combination of J and K	
K	Vacuum rel adjustment	Screwdriver operation type		Vacuum release flow adjustment needle	<b>*</b>	and K	
L	Manifold individual supply specification*6					_	
Р	With manifold common release pressure supply (PD) port					_	

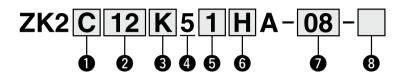
- \*4 When more than one option is selected, list the option symbols in alphabetical order. (Example -EL)
- \*5 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.
- \*6 When F or H is selected for 1 and L is selected for the option, the space for adjusting the needle is reduced. Products which can be operated more easily can be specified by option E.

### Ejector System Vacuum Unit K2 A Series

For Manifold Ejector + With Valve + IO-Link Compatible

Refer to page 19 for How to Order Manifold, pages 38 and 42 for the port layouts (including circuit examples).

#### **How to Order**



Body/Exhaust type

$\overline{}$	Body/Exhludst type						
Symbol	Body	Exhaust type					
С		Complex exhaust*1	End plate exhaust				
F	For Manifold	Individual port exhaust	Individual port exhaust				
н		High-noise reduction silencer exhaust	High-noise reduction silencer exhaust				

\*1 Combination of direct exhaust and end plate exhaust from each station

#### Rated voltage (Supply valve/Release valve)

Symbol	Voltage
5	24 VDC

#### 6 Connector

Symbol	Lead wire with connector for IO-Link (With M12 connector): 300 mm
Н	•
L3	None

#### Vacuum (V) port

<u> </u>	acadiii (1) port
Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

#### 2 Nominal nozzle size\*2

Symbol	Nominal nozzle size
07	ø0.7
10	ø1.0
12	ø1.2
15	ø1.5

\*2 Refer to page 29 for the standard supply pressure per nozzle

#### Combination of supply valve and release valve

Symbol	Supply	Release valve	
Syllibol	N.C.	N.O.	N.C.
K	•	_	•
Е	_	•	•

5 IO-Link compatible vacuum pressure switch

Symbol	Pressure range	Specifications		
Symbol	[kPa]	Energy saving function*3	With unit selection function*4	
1	0 to -101	_	•	
2		_	None (SI unit only)	
3	-100 to 100	_	•	
4		_	None (SI unit only)	
5		•	•	
6		•	None (SI unit only)	

- \*3 In order to use the energy-saving function, 2 check valves are required. Symbols "1," "2," "3," and "4" for ⑤ are for a single check valve, so the energy-saving function cannot be used.
  - Symbols "5" and "6" for 6 are equipped with 2 check valves, so the energy-saving function can be used. However, when the vacuum is stopped, workpiece release by atmospheric release cannot be used.
- \*4 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

	Symbol Type Note						
Symbol				Note			
Nil	Without o	ption			_		
E	e flow edle* <sup>6</sup>	Screwdriver operation type long lock nut	Oligorem	driver operation	Can be selected		
J	Vacuum release flow adjustment needle*6	Round lock nut	<b>1</b> 00	Lock nut	only for the combination of J and K		
κ	Vacuu	Screwdriver operation type	LVO, F INTROPE	m release djustment needle	and K		
L	Manifold	individual supply spe	ecification*7	Individual supply port	_		
Р		nifold common releas supply (PD) port	e		_		
w	With exha	aust interference on valve		Exhaust interference prevention valve	Cannot be selected when <b>5</b> is 5 or 6		

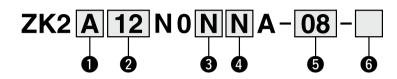
- \*5 When more than one option is selected, list the option symbols in alphabetical order. (Example -EL)
- \*6 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.
- \*7 When F or H is selected for 1 and L is selected for the option, the space for adjusting the needle is reduced. Products which can be operated more easily can be specified by option E.

## ☐**A** Series

For Manifold Ejector + Without Valve + Without Energy Saving Function

Refer to page 19 for How to Order Manifold.

#### **How to Order**



<b>0</b> B	ody/Exhaus	t type
Symbol	Body	Exhaust type
A		Silencer exhaust*1
В	Single unit	Port exhaust
G		High-noise reduction silencer exhaust
С		Complex exhaust*2 End plate exhaust
F	For Manifold	Individual port exhaust
н		High-noise reduction silencer exhaust

- \*1 With exhaust port when 2 is 12 or 15
- \*2 Combination of direct exhaust and end plate exhaust from each station

#### 2 Nominal nozzle size\*3

Symbol	Nominal nozzle size			
07	ø0.7			
10	ø1.0			
12	ø1.2			
15	ø1.5			

\*3 Refer to page 29 for the standard supply pressure per nozzle diameter.

#### 4 Connector

Symbol	For pressure switch for vacuum: sensor 2 m (Lead wire assembly: 3 m with connector) (With lead wire)	Note
Y	•	Cannot be selected when 3 is N
Y1	None	Cannot be selected when <b>3</b> is P, T, or N
N	None	When "N" is selected for 3

#### Pressure switch for vacuum/Pressure sensor

				Spe	cifications		
Symbol	Type	Pressure range [kPa]			With unit selection		
		range [Ki a]	2 ou	tputs	function*4		
Α			•	_	•		
В	for	0 to -101	•	_	None (SI unit only)		
С	Pressure switch for vacuum	010-101	_	•	•		
D			_	•	None (SI unit only)		
E	ure /acı		•	_	•		
F	lsse	-100 to 100	•	_	None (SI unit only)		
Н	Pre	-100 10 100	_	•	•		
J			_	•	None (SI unit only)		
Р	Pressure	0 to -101	,	\nalaa c	outout 1 to 5 V		
Т	sensor	-100 to 100	_ <i></i>	anaiog C	output 1 to 5 V		
N	Without p	ressure switch for	or vacuu	ım/pres	sure sensor		

<sup>\*4</sup> The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### **5** Vacuum (V) port

Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

Symbol	•	Note	
Nil	Without option	***	_
В	Mounting bracket for single ur (nuts and bolts are included)	nit Bracket	Cannot be selected when 1 is C, F, or H
L	Manifold individual supply specification	Individual supply port	Cannot be selected when <b>1</b> is A, B, or G
w	With exhaust interference prevention valve	Exhaust interference prevention valve	Install the atmospheric release valve or vacuum release valve in the middle of the vacuum piping.

<sup>\*5</sup> When more than one option is selected, list the option symbols in alphabetical order. (Example -BW)

Individual Wiring/D-sub Connector/Flat Ribbon Cable Connector

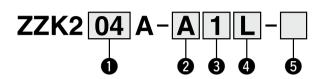
## ZK2 A Series



Manifold

Refer to pages 15 to 18 for the ejector installed to the manifold, pages 37, 38, 40 to 42 for the port layouts (including circuit examples), and pages 62 to 64 for the dimensions.

#### **How to Order Manifold**



If the manifold parts (set of end plates for both ends and tension bolts) are shipped unassembled, please refer to page 48.

#### Stations\*1

Symbol	Stations
01	1 station
02	2 stations
:	:
10	10 stations

\*1 For adequate performance, the number of stations that can be operated simultaneously depends on the nozzle diameter. Refer to the Max. Number of Manifold Stations that can be Operated Simultaneously on page 29.

#### 2 System/Port

Symbol	System	Port				
Α	<b>-</b> :	ø8 (Common PV)				
AN	Ejector system	ø5/16" (Common PV)				

#### 3 Exhaust

Symbol	Exhaust	Selectable single unit number
1	Complex exhaust*2	ZK2C Direct exhaust End plate exhaust
2	Individual exhaust	ZK2F, ZK2H

\*2 Combination of direct exhaust and end plate exhaust from each station

#### 4 Supply valve and release valve wiring\*2

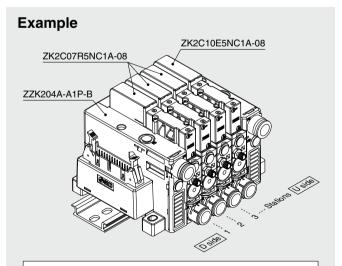
Symbol	Wiring	Selectable wiring for manifold (Refer to 6 on pages 15 to 17 and 4 on page 18.)										
		С	C1	L	L1	L2	L3	W	Н	Υ	<b>Y1</b>	N
L	Individual wiring	_	_	•	•	•	•	•	•	_	_	
F	D-sub connector	•	•	_	_	_	_	_	_	_	_	
Р	Flat ribbon cable connector	•	•	_	_	_	_	_	_	_	_	_
N	No wiring (No valve)	_	_	_	_	_		_	_	•	•	•

<sup>\*3</sup> Common wiring F/P is available only for solenoid valve wiring. Individual wiring is specified for vacuum switches and sensors.

#### **5** Option\*4 (For details on the Function/Application, refer to page 69.)

Symbol	Туре		ctable fer to 7 and	Note				
		E	J	K	L	P	W	
Nil	Without option	•	•	•	_	_	•	_
В	With DIN rail mounting bracket*5	•	•	•	•	•	•	_
D	With common release pressure supply (PD) port	•	•	•	_	©*6	•	Cannot be selected when <b>@</b> is N
L	Manifold individual supply specification Individual supply port	•	•	•	⊚*6	_	•	_

- \*4 When more than one option is selected, list the option symbols in alphabetical order. (Example -BD)
- \*5 The DIN rail should be ordered separately. (Refer to page 48.)
- \*6 When the option D is selected, select P for single unit for manifold. When the option L is selected, select L for single unit for manifold. (⊚ must be selected.)



- ZZK204A-A1P-B ·············1 set (Manifold part number)
- \* ZK2C07R5NC1A-08 ----- 3 sets
- \* ZK2C10E5NC1A-08 ----- 1 set
  - → The asterisk denotes the symbol for the assembly.
    - \* Prefix to the single unit part number.
- $\cdot$  When the manifold is viewed from V port, the first station starts from the left (D side).
- After the manifold part number, specify the installed single unit from the first station.

  Complex exhaust and individual port exhaust cannot be mixed in the
- ejector system manifold.

  The DIN rail should be ordered separately. (Refer to page 48.)

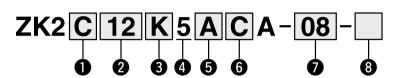
Ejector System Vacuum Unit Fieldbus System

**△A** Series

For Manifold Ejector + With Valve + Without Energy Saving Function

Refer to page 21 for How to Order Manifold.

#### **How to Order Ejectors**



Rody/Exhaust type

	ouy/⊑xnaus	st type						
Symbol	Body	Exhaust type						
С		Complex exhaust*1 End plate exhaust						
F	For Manifold	l los alto distribute los a control de la co	vidual exhaust					
н		High-noise reduction silencer exhaust						

\*1 Combination of direct exhaust and end plate exhaust from each station

#### 5 Pressure switch for vacuum/Pressure sensor

_						
				Spe	cifications	
Symbol	Type	Pressure range [kPa]	NPN	PNP	With unit selection	
		range [ki a]	2 ou	tputs	function*4	
Α			•	_	•	
В	for	0 to -101	•	_	None (SI unit only)	
С	_ g	010-101	_	•	•	
D	swi		_	•	None (SI unit only)	
E	Pressure switch for vacuum		•	_	•	
F	essi)	-100 to 100	•	_	None (SI unit only)	
Н	P.	-100 to 100	_	•	•	
J			_	•	None (SI unit only)	
Р	Pressure	0 to -101	ļ ,	\nalaa a	output 1 to 5 V	
T	sensor	-100 to 100	Analog output 1 to 5 V		σιιμαι τιο 5 ν	
N	Without p	ressure switch for	or vacuum/pressure sensor			

\*4 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### Vacuum (V) port

Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

2 Nominal nozzle size\*2

Symbol	Nominal nozzle size		
07	ø0.7		
10	ø1.0		
12	ø1.2		
15	ø1.5		

\*2 Refer to page 29 for the standard supply pressure per nozzle diameter.

#### Combination of supply valve and release valve

Cumbal	Supply valve			Release valve
Symbol	N.C.	N.O.	Self-holding	N.C.
K	•	_	_	•
J	•	_	_	_
R	_	_	●*3	•
Е	_	•	_	•

\*3 Supply valve maintains vacuum by energization (20 ms or more). Stopping the vacuum turns on the release valve. Refer to the precautions on page 90.

#### Rated voltage (Supply valve/Release valve)

Symbol	Voltage	
5	24 VDC	

#### 6 Connector (Supply valve/Release valve/Pressure switch for vacuum)

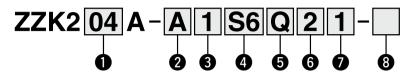
	• • • • • • • • • • • • • • • • • • •					
Cumbal	For supply valve/ release valve	For pressure switch for yacuum: 2 m		Note		
Symbol	Common wiring specification (Plug-in)	/Lood wire with	assembly: 3 m (With lead wire)	Note		
С	•		•	Cannot be selected when <b>5</b> is N		
C1	•	None		Cannot be selected when <b>5</b> is P or T		

	puon	to page 03.)		
Symbol		T	Note	
Nil	Without c	ption		_
E	se flow edle* <sup>6</sup>	Screwdriver operation type long lock nut	Screwdriver operation type long lock nut	Cannot be selected when §
J	Vacuum release flow adjustment needle*6	Round lock nut	Lock nut	is J Can be selected only for the
K		Screwdriver operation type	Vacuum release flow adjustment needle	combination of J and K
L		individual pecification* <sup>7</sup>	Individual supply port	_
Р		nifold common rele supply (PD) port	Cannot be selected when 3 is J	
w	With exha	aust interference n valve	Exhaust interference prevention valve	When J is selected for <b>③</b> , install the atmospheric release valve or vacuum release valve in the middle of the vacuum piping.

- \*5 When more than one option is selected, list the option symbols in alphabetical order. (Example -EL) \*6 When "K," "R," or "E" is selected for 3, a vacuum release flow adjustment needle is
- installed as standard. However, select it when improved operability is required. \*7 When F or H is selected for 1 and L is selected for the option, the space for adjusting the needle is reduced. Products which can be operated more easily can be specified by option E.

Refer to page 20 for the ejector installed to the manifold and pages 65 to 68 for the dimensions.

#### Fieldbus Compatible Vacuum Unit How to Order Manifolds



#### Stations\*1

Symbol	Stations		
01	1 station	2 outputs per station	
02	2 stations	(Supply valve/	
: :		Release valve)	
08	8 stations	Max. 16 outputs	

\*1 For adequate performance, the number of stations that can be operated simultaneously depends on the nozzle diameter. Refer to the Max. Number of Manifold Stations that can be Operated Simultaneously on page 29.

#### 2 System/Port

Symbol	System	Port	
Α		ø8	
A	Ejector system	(Common PV)	
AN		ø5/16"	
AN		(Common PV)	

#### 3 Exhaust

Symbol	Exhaust	Selectable single unit number	
1	Complex exhaust*2	ZK2C	
2	Individual exhaust	ZK2F, ZK2H	

\*2 Combination of direct exhaust and end plate exhaust from each station

#### 4 SI unit

	Symbol	SI unit
	S0	Without SI unit
	S	EX260/EX500
	S6	EX600

#### **5** SI unit

#### **EX260**

Symbol			Number	Communication
Positive common	Negative common	Protocol	of	connector
(NPN)	(PNP)		outputs	specifications
QA	QAN	DeviceNet <sup>®</sup>		M12
NA	NAN	PROFIBUS DP		M12
NC	NCN			D-sub
VA	VAN	CC-Link		M12
DA	DAN	EtherCAT	32	M12
FA	FAN	PROFINET		M12
EA	EAN	EtherNet/IP™		M12
*3	— GAN Ethernet I OWENEINK			M12
*3	KAN	IO-Link		M12

\*3 Positive common (NPN) type is not available.

#### **EX500**

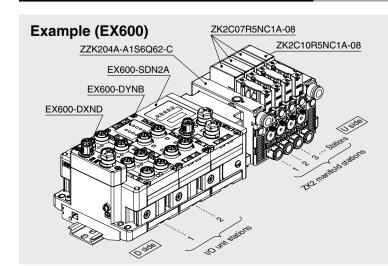
Symbol	SI unit	Number of outputs	Connector specifications
A3N	Gateway decentralized system 2	32*4, *5	M12

- \*4 16 outputs can be set by switching the built-in setting switch.
- \*5 When using the SI unit with 32 outputs, use the GW unit compatible with the EX500 Gateway Decentralized System 2 (128 points).

#### EX600\*6

Symbol	Protocol	Number of outputs
Q	DeviceNet®	
N	PROFIBUS DP	
V	CC-Link	
EB	EtherNet/IP™ (IO-Link unit)	
DA	EtherCAT (IO-Link unit)	
FA	PROFINET (IO-Link unit)	
WE	EtherNet/IP™ compatible wireless base*7	
WF	PROFINET compatible wireless base*7	
WS	Wireless remote*7	

- \*6 I/O unit cannot be mounted without SI unit.
- \*7 The wireless system is suitable for use only in a country where it is in accordance with the Radio Act and regulations of that country.



- ZZK204A-A1S6Q62-C ····· 1 set (Manifold part number)
- \* ZK2C07R5NC1A-08 ...... 3 sets
- \* ZK2C10R5NC1A-08 ------ 1 set
- \* EX600-DXND ··············· 1 set I/O unit part number (Station 1)
  \* EX600-DYNB ·············· 1 set I/O unit part number (Station 2)
- → \* The asterisk denotes the symbol for the assembly.
- \* Prefix to the single unit part number.
- \* Frenk to the single unit part number.
- $\cdot$  When the manifold is viewed from V port, the first station starts from the left (D side).
- After the manifold part number, state the ejectors to be mounted in order starting with the first station, and then state the I/O units in order starting with the first station as shown in the figure.
- · Refer to page 54 for the I/O unit part numbers.
- Complex exhaust and individual port exhaust cannot be mixed in the ejector system manifold.
- $\cdot$  The DIN rail should be ordered separately. (Refer to page 48.)

6 SI output polarity, End plate type Only available for EX600

om, aranabio					
SI unit output	M12 power supply connector B-coded	7/8 inch power		pply connector A-coded	
polarity	(EX600-ED2)	supply connector (EX600-ED3)	Pin arrangement 1 (EX600-ED4)	Pin arrangement 2 (EX600-ED5)	
Without SI unit	Nil				
SI unit positive common	2	3	6	8	
SI unit negative common	4	5	7	9	

- Ensure a match with the common specification of the valve to be used.
- \* When not selecting an SI unit, the symbol will be "nil."

#### Option

	Туре		Selectable options for manifold					
Symbol			(Refer to "How to Order Ejectors" on page 20.)					
		E	J	K	L	Р	W	
Nil	Without option		•	•	_	_	•	
В	With DIN rail mounting bracket for the EX260/EX500*8		•	•	•	•	•	
С	With DIN rail mounting bracket for the EX600*8		•	•	•	•	•	
D	With common release pressure supply (PD) port		•	•	_	◎*9	•	
L	Manifold individual supply specification	•	•	•	◎*9	_	•	

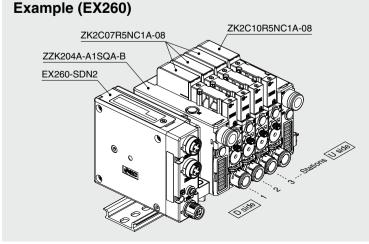
- \*8 The DIN rail should be ordered separately. (Refer to page 46.)
- \*9 When option "D" is selected, select option "P" for the single unit for manifold. When option "L" is selected, select option "L" for the single unit for manifold. (

  must be selected.)
- \* When more than one option is selected, list the option symbols in alphabetical order. (Example -BD)

#### 7 I/O unit stations Only available for EX600

<u> </u>	Offiny available for Excoor				
N	lil	None			
	1	1 station			
	:				
	9	9 stations			

- \* When not selecting an SI unit, the symbol will be
- \* SI unit is not included in I/O unit stations.
- \* When I/O unit is selected, it is shipped separately, and assembled by users. Refer to the attached operation manual for mounting.



- ZZK204A-A1SQA-B ...... 1 set (Manifold part number)
- \* ZK2C07R5NC1A-08 ...... 3 sets
- \* ZK2C10R5NC1A-08 ...... 1 set
- \* The asterisk denotes the symbol for the assembly.
  - \* Prefix to the single unit part number.
- When the manifold is viewed from V port, the first station starts from the left (D side).
- After the manifold part number, specify the installed single unit from the first station.
- Complex exhaust and individual port exhaust cannot be mixed in the ejector system manifold.
- The DIN rail should be ordered separately. (Refer to page 48.)

### Vacuum Pump System Vacuum Unit

### ZK2 A Series



Single Unit Vacuum Pump System + With Valve + Without Energy Saving Function

Refer to pages 36 and 38 for the port layouts (including circuit examples) and page 57 for the dimensions.

#### **How to Order**



### Combination of supply valve and release valve

Symbol	Supply	/ valve	Release valve
Symbol	N.C.	Self-holding	N.C.
K	•	_	•
J	●*1	_	_
R	_	●*2	•

- \*1 Install the atmospheric release valve or vacuum release valve in the middle of the vacuum piping.
- \*2 Supply valve maintains vacuum by energization (20 ms or more). Stopping the vacuum turns on the release valve. Refer to the precaution on page 90.

### 2 Rated voltage (Supply valve/Release valve)

Symbol	Voltage
5	24 VDC
6	12 VDC

#### 3 Pressure switch for vacuum/Pressure sensor

		D		Spe	cifications
Symbol	Type	Pressure range [kPa]	NPN	NPN PNP With unit sele	
		range [Ki a]	2 ou	tputs	function*3
Α	Pressure switch for vacuum		•	_	•
В		0 to -101	•	_	None (SI unit only)
С		0 10 - 10 1	_	•	•
D	swi		_	•	None (SI unit only)
E	ure /acı		•	_	•
F	1SSE	-100 to 100	•	ı	None (SI unit only)
Н	Pre	-100 10 100	_	•	•
J			_	•	None (SI unit only)
P	Pressure	0 to -101	Analog output 1 to 5 V		
T	sensor	-100 to 100			
N	Without pressure switch for vacuum/pressure sensor				

\*3 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### Connector (Supply valve/Release valve/Pressure switch for vacuum)

Symbol	For supply valve/release valve: 300 mm (Connector assembly)*4	For pressure switch for vacuum: 2 m (Lead wire with connector)	Pressure sensor assembly: 3 m (With lead wire)	Note
L	•			Cannot be selected
L1	None			when 3 is N
L2	•	None		Cannot be selected
L3	None	None		when 3 is P or T

<sup>\*4</sup> For the connector length other than 300 mm, order the connector assembly on page 44 separately.

#### **5** Vacuum (V) port

Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

Symbol		Note			
Nil	Without o	ption		~~~	_
В		bracket for single unit bolts are included)	it	Bracket	_
С		oump system emale thread tion (M3)	PE	port	When R is selected for ①, D needs to be selected.
D		vidual release supply (PD) port (M3	)* <sup>6</sup>	PD port	Cannot be selected when 1 is J
E	se flow edle*7	Screwdriver operation type long lock nut		wdriver operation ong lock nut	Cannot be selected when <b>1</b>
J	Vacuum release flow adjustment needle*7	Round lock nut		Lock nut	is J Can be selected only for the
κ	Vacut adjust	Screwdriver operation type	N N N N N N N N N N N N N N N N N N N	uum release adjustment needle	combination of J and K

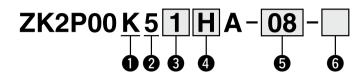
- \*5 When more than one option is selected, list the option symbols in alphabetical order. (Example -BJ)
- \*6 Use a One-touch fitting or barb fitting (M-3AU-4) for piping. (O.D.: Within Ø6.2)
- \*7 When "K" or "R" is selected for 1, a vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

Vacuum Pump System Vacuum Unit A Series

Single Unit Vacuum Pump System + With Valve + IO-Link Compatible

Refer to page 38 for the port layout (including a circuit example).

#### **How to Order**



#### Combination of supply valve and release valve

Cumbal	Supply valve	Release valve
Symbol	N.C.	N.C.
K	•	•

#### 2 Rated voltage (Supply valve/Release valve)

	,
Symbol	Voltage
5	24 VDC

#### 3 IO-Link compatible vacuum pressure switch

Symbol	Pressure range	Specifications
Syllibol	[kPa]	With unit selection function*1
1	0 to -101	•
2		None (SI unit only)
3	100 +- 100	•
4	-100 to 100	None (SI unit only)

The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### 4 Connector

Symbol	Lead wire with connector for IO-Link (With M12 connector): 300 mm
Н	•
L3	None

#### 5 Vacuum (V) port

Symbol	Vacuum (V) port	
06	ø6	
08	ø8	
07	ø1/4"	
09	ø5/16"	

Symbol	Type				Note	
Nil	Without option			_		
В	Mounting bracket for single unit (nuts and bolts are included)  Bracket				_	
С	Vacuum pump system PE port female thread specification (M3)				•	_
D	With individual release pressure supply (PD) port (M3)*3				_	
E	se flow edle*4	Screwdriver operation type long lock nut		crewdriver operati pe long lock nut	on	Can be selected
J	Vacuum release flow adjustment needle**	Round lock nut		Lock nut		only for the combination of J and K
κ	Vacuu adjust	Screwdriver operation type	% N M	Vacuum release flow adjustment	needle	and it

- \*2 When more than one option is selected, list the option symbols in alphabetical order. (Example -BJ)
- \*3 Use a One-touch fitting or barb fitting (M-3AU-4) for piping. (O.D.: Within Ø6.2)
- \*4 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

### Vacuum Pump System Vacuum Unit

## ZK2 A Series



For Manifold Vacuum Pump System + With Valve + Without Energy Saving Function

Refer to page 27 for How to Order Manifold, pages 36 and 39 for the port layouts (including circuit examples), and pages 62 to 64 for the dimensions.

#### **How to Order**



### Combination of supply valve and release valve

Cumbal	Supply valve		Release valve
Symbol	N.C.	Self-holding	N.C.
K	•	_	•
J	●*1	_	_
R	_	●*2	•

- \*1 Install the atmospheric release valve or vacuum release valve in the middle of the vacuum piping.
- \*2 Supply valve maintains vacuum by energization (20 ms or more). Stopping the vacuum turns on the release valve.

Refer to the precaution on page 90.

### 2 Rated voltage (Supply valve/Release valve)

Symbol	Voltage
5	24 VDC
6	12 VDC

#### 3 Pressure switch for vacuum/Pressure sensor

		Pressure range [kPa]		Spe	cifications
Symbol	Туре		NPN	PNP	With unit selection
			2 ou	tputs	function*3
Α			•	_	•
В	for	0 to -101	•	_	None (SI unit only)
С	Pressure switch for vacuum		_	•	•
D			_	•	None (SI unit only)
E	ure /acı		•	_	•
F	) Sessi	100 += 100	•	_	None (SI unit only)
Н	Pre	–100 to 100	_	•	•
J			_	•	None (SI unit only)
Р	Pressure	0 to -101	Analog output 1 to 5		outout 1 to E V
Т	sensor	-100 to 100			output i to 5 v
N	Without p	ressure switch for	or vacuum/pressure sensor		

\*3 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### 4 Connector

#### (Supply valve/Release valve/Pressure switch for vacuum)

	For supply valve/release valve		For pressure Pressure		
Symbol	Centralized wiring specification (Plug-in)	Individual wiring specification: 300 mm (Connector assembly)*4	switch for vacuum: 2 m (Lead wire with connector) (With lead wire)	Note	
С	•	None	•	Cannot be selected when 3 is N	
C1	•	None	None	Cannot be selected when 3 is P or T	
L	None	•	•	Cannot be selected	
L1	None	None	•	when 3 is N	
L2	None	•	None	Cannot be selected	
L3	None	None	None	when 3 is P or T	
			000		

<sup>\*4</sup> For the connector length other than 300 mm, order the connector assembly on page 44 separately.

#### 5 Vacuum (V) port

Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

Symbol		Туре			Note
Nil	Without c	Without option			_
С		pump system PE port read specification (M3	PE port		When R is selected for ①, P needs to be selected.
E	ease flow needle*6	Screwdriver operation type long lock nut		Screwdriver operation type long lock nut	Cannot be selected when <b>1</b> is J
J	m release ment need	Round lock nut		Lock nut	Can be selected only for the combination of J
K	Vacuum rel	Screwdriver operation type		Vacuum release flow adjustment needle	and K
Р	With manifold common release pressure supply (PD) port			Cannot be selected when 1 is J	

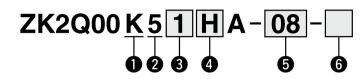
- \*5 When more than one option is selected, list the option symbols in alphabetical order. (Example -EP)
- \*6 When "K" or "R" is selected for 1, a vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

Vacuum Pump System Vacuum Unit A Series

For Manifold Vacuum Pump System + With Valve + IO-Link Compatible

Refer to page 27 for How to Order Manifold and page 36 for the port layout (including a circuit example).

#### **How to Order**



#### Combination of supply valve and release valve

Cumbal	Supply valve	Release valve	
Symbol	N.C.	N.C.	
K	•	•	

#### 2 Rated voltage (Supply valve/Release valve)

Symbol	Voltage
5	24 VDC

#### 3 IO-Link compatible vacuum pressure switch

	Symbol	Pressure range	Specifications		
		[kPa]	With unit selection function*1		
	1	0 to -101	•		
	2	0 10 - 101	None (SI unit only)		
	3	-100 to 100	•		
	4	-100 10 100	None (SI unit only)		

The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### Connector

Lead wire with connector for IO-Link (With M12 connector): 300 mm
•
None

**5** Vacuum (V) port

	<u> </u>
Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
09	ø5/16"

Symbol		Note		
Nil	Without o	pption		_
С		pump system PE port read specification (M3)	PE port	_
E	e flow edle*3	Screwdriver operation type long lock nut	Screwdriver operation type long lock nut	Can be releated
J	Vacuum release flow adjustment needle*3	Round lock nut	Lock nut	Can be selected only for the combination of J and K
K	Vacut adjust	Screwdriver operation type	Vacuum release flow adjustment needle	unu it
Р	With mar	_		

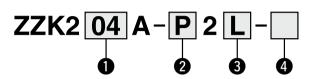
- \*2 When more than one option is selected, list the option symbols in alphabetical order. (Example -EP)
- \*3 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

# Vacuum Pump System Vacuum Unit ( CA Series RoHS)

Manifold

Refer to pages 25 and 26 for the vacuum pump system installed to the manifold, pages 36 and 39 for the port layouts (including circuit examples), and pages 62 to 64 for the dimensions.

#### **How to Order Manifold**



If the manifold parts (set of end plates for both ends and tension bolts) are shipped unassembled, please refer to page 48.

#### 1 Stations

Symbol	Stations		
01	1 station		
02	2 stations		
:	÷		
10	10 stations		

#### 2 System/Port

Symbol	System	Port			
Р		ø8 (Common PV) ø6 (Common PS)			
PN		ø5/16"(Common PV) ø1/4" (Common PS)			

#### 3 Supply valve and release valve wiring\*1

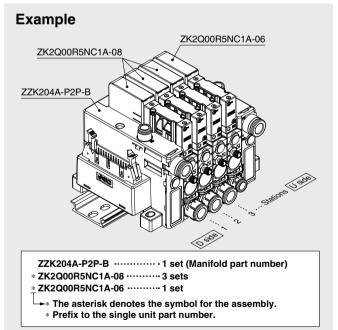
Symbol	Wiring	Selectable wiring for manifold 4 (Refer to pages 25 and 26.)							
		С	C1	L	L1	L2	L3	Н	
L	L Individual wiring		_	•	•	•	•	•	
F	D-sub connector	•	•	_	_	_	_	_	
Р	Flat ribbon cable connector	•	•	_	_	_	_	_	

<sup>\*1</sup> Common wiring F/P is available only for solenoid valve wiring. Individual wiring is specified for vacuum switches and sensors.

#### 4 Option\*2 (For details on the Function/Application, refer to page 69.)

Symbol	Туре	Selectable option for manifold <b>6</b> (Refer to pages 25 and 26.)					
		С	Е	J	K	Р	
Nil	Nil Without option		•	•	•	_	
В	With DIN rail mounting bracket*3	•	•	•	•	•	
D	With common release pressure supply (PD) port	•	•	•	•	◎*4	

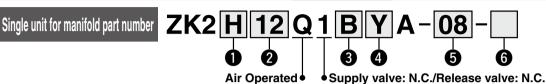
- \*2 When more than one option is selected, list the option symbols in alphabetical order. (Example -BD)
- \*3 The DIN rail should be ordered separately. (Refer to page 48.)
- \*4 When D is selected for manifold option, select P for single unit option. (⊚ must be selected.)



- $\cdot$  When the manifold is viewed from V port, the first station starts from the left (D side).
- · After the manifold part number, specify the installed single unit from the first station.
- The DIN rail should be ordered separately. (Refer to page 48.)

**How to Order** 

Refer to pages 80 to 84 for the port layouts (including circuit examples) and page 89 for the dimensions.



Bodv/Exhaust type

_	<u> </u>						
Symbol	Body	Exhaust type					
С	For Manifold	Complex exhaust*1 End plate exhaust					
F		Individual port exhaust					
Н		High-noise reduction silencer exhaust					

\*1 Combination of direct exhaust and end plate exhaust from each station

#### 2 Nominal nozzle size\*2

Symbol	Nominal nozzle size				
07	ø0.7				
10	ø1.0				
12	ø1.2				
15	ø1.5				

\*2 Refer to page 78 for the standard supply pressure per nozzle diameter.

#### 3 Pressure switch for vacuum/Pressure sensor

			Pressure		Spec	cifications
	Symbol	Type	range [kPa]	NPN	PNP	With unit selection
				2 out	tputs	function*3
	Α	or	0 to -101	•	_	•
	В	hf		•	_	None (SI unit only)
	C	ritc T		_	•	•
	D	ressure switch for vacuum		_	•	None (SI unit only)
	Е			•	_	•
	F		-100 to 100		_	None (SI unit only)
	Н		-100 10 100	_	•	•
	J	Ы			•	None (SI unit only)
	Р	Pressure	0 to -101	٨٠	Analog output 1 to	
	Т	sensor	-100 to 100	Arialog out		utput 1 to 5 v
N Without pressure switch for vacuum/pressure s				essure sensor		

\*3 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### Connector (Pressure switch for vacuum)

Symbol	For pressure switch for vacuum: 2 m (Lead wire with connector)	Pressure sensor assembly: 3 m (With lead wire)	Note
Υ		Cannot be selected when 3 is N	
V4	NI-	Cannot be selected	
Y1	None		when 3 is P, T, or N
N	N None		When "N" is selected
.,			for <b>3</b>

#### Vacuum (V) port

Symbol	Vacuum (V) port
06	ø6
08	ø8
07	ø1/4"
N9	ø5/16"

#### 6 Option\*4

Symbol		Note				
Nil	Without op	otion		1	_	
E	Vacuum	Screwdriver operation type long lock nut	on Con	Screwdriver operation type long lock	_   Can be	
J	release flow adjustment	Round lock nut		Lock nut	selected o for the combinatio	,
K	needle*5	Screwdriver operation type		Vacuum release flow adjustment needle	J and K	
M	Manifold ir supply spe	ndividual ecification*6		Individual supply port	Multiple options car	
Р		fold common rele supply (PD) port	ease		be selecte	
W	With exhain prevention	ust interference valve		Exhaust interference prevention valve		

- \*4 When more than one option is selected, list the option symbols in alphabetical order. (Example -EM)
- \*5 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.
- \*6 When F or H is selected for 1 and M is selected for the option, the space for adjusting the needle is reduced. Products which can be operated more easily can be specified by option E.

#### Manifold part number

**ZZK2 04 A** 

If the manifold parts (set of end plates for both ends and tension bolts) are shipped unassembled, please refer to page 48.

#### Stations\*7

_		
Symbol	Stations	
01	1 station	
02	2 stations	
:	:	
10	10 stations	

\*7 For adequate performance, the number of stations that can be operated simultaneously depends on the nozzle diameter. Refer to the Max. Number of Manifold Stations that can be Operated Simultaneously on page 78.

#### 8 System/Port

Symbol	System	Port	
Α	Cinatar	ø8 (Common PV)	
AN	Ejector	ø5/16"	
AIN	system	(Common PV)	

#### 9 Exhaust

Symbol	Exhaust	Note
1	Complex exhaust*8	Select this option when "C" is selected for   ■ Body/Exhaust type.
2	Individual exhaust	Select this option when "H" or "F" is selected for   ■ Body/Exhaust type.

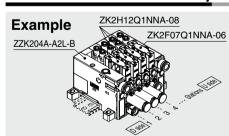
\*8 Combination of direct exhaust and end plate exhaust from each station

#### Option\*9

Symbol	Туре	Note		
Nil	Without option	_		
В	With DIN rail mounting	The DIN rail should be ordered		
В	bracket	separately.		
D	With common release pressure supply (PD) port	Select this option when "P" is selected for <b>6</b> Option.	Multiple options cannot be	
М	Manifold individual supply specification	Select this option when "M" is selected for <b>6</b> Option.	selected.	

\*9 When more than one option is selected, list the option symbols in alphabetical order. (Example -BD)

#### **How to Order Valve Manifold Assembly**



[1] When shipped, the single unit for manifold is already built into the manifold:

After the manifold part number, specify the single unit for manifold part number from the first station. In addition, prefix an asterisk to the single unit for manifold part number to indicate that it is to be built into the manifold.

Ex.) ZZK204A-A2L-B .....1 (Manifold 4 stations)

- \* ZK2H12Q1NNA-08----3 (Single unit for manifold: Stations 1 to 3) \* ZK2F07Q1NNA-06 ----1 (Single unit for manifold: Station 4)
- [2] When only ordering the single unit for manifold: Order using the single unit for manifold part number. Ex.) ZK2H12Q1NNA-08
- When the manifold is viewed from V port, the first station starts from the left (D side). Complex exhaust and individual port exhaust (High-noise reduction silencer exhaust) cannot be mixed in the ejector system manifold. · The DIN rail should be ordered separately. (Refer to page 48.)

Specifications

Port Layout

Replacement Parts Construction

**Exploded View** 

of Manifold

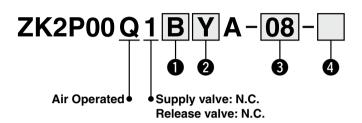
Dimensions

# Air Operated Specification Vacuum Unit ( E CA Series RoHS)

Single Unit Vacuum Pump System

Refer to page 79 for the port layout (including a circuit example) and page 88 for the dimensions.

#### **How to Order**



#### Pressure switch for vacuum/Pressure sensor

<u> </u>						
		Pressure range [kPa]	Specifications			
Symbol	Type		NPN	PNP	With unit selection	
		range [ki a]	2 ou	tputs	function*1	
Α			•	_	•	
В	for	0 to -101	•	_	None (SI unit only)	
С	달	0 10 - 101	_	•	•	
D	swi		_	•	None (SI unit only)	
E	Jre /act		•	_	•	
F	Pressure switch for vacuum	-100 to 100	•	_	None (SI unit only)	
Н	Pre	-100 10 100	_	•	•	
J			_	•	None (SI unit only)	
Р	Pressure	0 to -101	Analog output 1 to 5 V			
Т	sensor	-100 to 100				
N	Without p	ressure switch for	or vacuum/pressure sensor			

#### \*1 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### 2 Connector (Pressure switch for vacuum)

Symbol	For pressure switch for vacuum: 2 m (Lead wire with connector)	Pressure sensor assembly: 3 m (With lead wire)	Note
Y		Cannot be selected when <b>1</b> is N	
Y1	None		Cannot be selected when <b>1</b> is P, T, or N
N	None		When "N" is selected for <b>①</b>

#### 3 Vacuum (V) port

Symbol	Vacuum (V) port		
06	ø6		
08	ø8		
07	ø1/4"		
09	ø5/16"		

4 Option\*2

Symbol		Туре				
Nil	Without o	ption	<u>^</u>	_		
В		bracket for single unit bolts are included)	Bracket	_		
С	breathing	oump system I (PE) port female lecification (M3)	PE port	_		
E	e flow edle*3	Screwdriver operation type long lock nut	Screwdriver operation type long lock nut	Can be aslested		
J	Vacuum release flow adjustment needle*3	Round lock nut	Lock nut	Can be selected only for the combination of J and K		
к	Vacut	Screwdriver operation type	Vacuum release flow adjustment needle	o and ix		

- \*2 When more than one option is selected, list the option symbols in alphabetical order. (Example -BJ)
- \*3 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

## ZK2 A Series

For Manifold Vacuum Pump System

Refer to page 79 for the port layout (including a circuit example) and page 89 for the dimensions.

#### **How to Order**

Single unit for manifold part number

**ZK2Q00Q1B** 

Air Operated

Supply valve: N.C./Release valve: N.C.

#### Pressure switch for vacuum/Pressure sensor

		Duagassua	Specifications		
Symbol	Type	Pressure range [kPa]	NPN	PNP	With unit selection
		range [KFa]	2 ou	tputs	function*1
Α	_		•	_	•
В	of l	0 to -101	•	_	None (SI unit only)
С	Pressure switch for vacuum	010-101	_	•	•
D			_	•	None (SI unit only)
Е	ıre		•	_	•
F	ssr v	-100 to 100	•	_	None (SI unit only)
Н	)rei	-100 10 100		•	•
J	1		_	•	None (SI unit only)
Р	Pressure	0 to -101	Analog output 1 to 5 V		output 1 to 5 V
T	sensor	-100 to 100			Julput 1 to 5 V
N	Without p	pressure switch for vacuum/pressure sensor			

\*1 The unit selection function is not available in Japan due to the New Measurement Law. The unit for the type without the unit selection function is fixed as kPa.

#### 2 Connector (Pressure switch for vacuum)

Symbol	For pressure switch for vacuum: 2 m (Lead wire with connector)	Pressure sensor assembly: 3 m (With lead wire)	Note
Y	•		Cannot be selected when 3 is N
<b>Y</b> 1	None		Cannot be selected when 3 is P, T, or N
N	None		When "N" is selected for <b>3</b>

#### Nacuum (V) port

O rasaam (r) ps.		
Symbol	Vacuum (V) port	
06	ø6	
08	ø8	
07	ø1/4"	
09	ø5/16"	

Specifications

Port Layout

Replacement Parts

Construction

Exploded View of Manifold

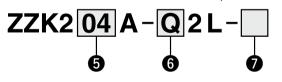
**Dimensions** 

4 Option\*2

	C opnon			
5	Symbol	Туре		Note
	Nil	Without option		_
	С	Vacuum pump system breathing (PE) port female thread specification (M3)		_
	Е	Vacuum release Screwdriver operation type long lock nut		Can be selected only
	J	flow adjustment	Round lock nut	for the combination
	Κ	needle*3	Screwdriver operation type	of J and K

\*2 When more than one option is selected, list the option symbols in alphabetical order, (Example -CJ) \*3 A vacuum release flow adjustment needle is installed as standard. However, select it when improved operability is required.

#### Manifold part number



If the manifold parts (set of end plates for both ends and tension bolts) are shipped unassembled, please refer to page 48.

#### Stations

Symbol	Stations	
01	1 station	
02	2 stations	
÷	:	
10	10 stations	

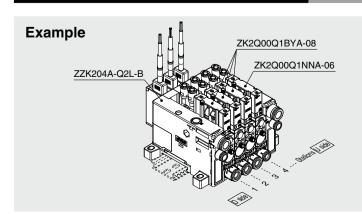
#### 6 System/Port

Symbol	System	Port
G		ø8 (Common PV)
Q	Vacuum	ø6 (Common release pressure)
QN	pump system	ø5/16" (Common PV)
QIV		ø1/4 (Common release pressure)

#### Option

	Symbol	Type	Note
	Nil	Without option	_
	В	With DIN rail mounting bracket	The DIN rail should be ordered separately.

#### How to Order Valve Manifold Assembly



[1] When shipped, the single unit for manifold is already built into the manifold:

After the manifold part number, specify the single unit for manifold part number from the first station.

In addition, prefix an asterisk to the single unit for manifold part number to indicate that it is to be built into the manifold.

Ex.) ZZK204A-Q2L-B.....1 (Manifold 4 stations)

- \* ZK2Q00Q1BYA-08-----3 (Single unit for manifold: Stations 1 to 3)
- \* ZK2Q00Q1NNA-06-----1 (Single unit for manifold: Station 4)
- [2] When only ordering the single unit for manifold: Order using the single unit for manifold part number. Ex.) ZK2Q00Q1BYA-08
- · When the manifold is viewed from V port, the first station starts from the left (D side).
- · The DIN rail should be ordered separately. (Refer to page 48.)