

AZK Series

Integrated Vacuum Generator

AIRBEST



ELECTRONICS PACKAGING PLASTIC

RoHS

Features

- ◇ Energy-efficient nozzle design
- ◇ With energy-saving control device
- ◇ With normally open vacuum supply valve
- ◇ Small size and light weight. The volume is 85cm³
- ◇ Transparent filter housing
- ◇ Single body with L bracket, DIN guide rail installation for integrated body, centralized air supply

Advantages

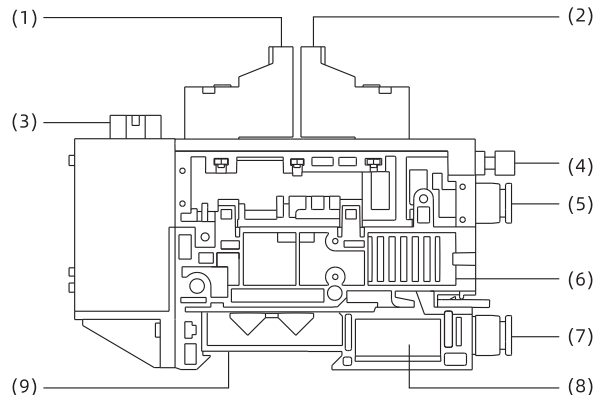
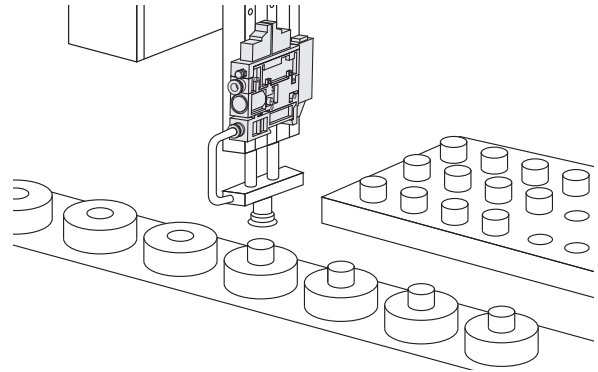
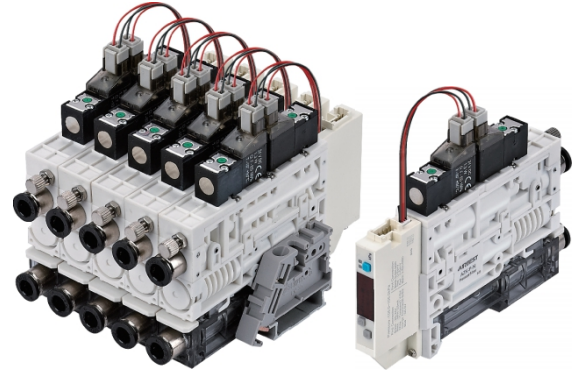
- ◇ Vacuum flow increased by 50% and air consumption decreased by 30%
- ◇ Air consumption reduced by 90%(compared with non-energy saving type)
- ◇ Power outage or power off does not affect vacuum producing and prevent the workpiece from falling
- ◇ The device is compact and can be installed directly in the handling system
- ◇ The cleanliness is visible and easy to replace
- ◇ Simple installation, can be installed directly on the distribution box

Applications

- ◇ Integrated vacuum generator for handling airtight and slightly porous workpieces
- ◇ Vacuum producing and monitoring in automation systems
- ◇ For robot handling applications and linear axes
- ◇ Pick and place applications with very short time
- ◇ Used for systems that require high dynamic handling of workpieces and with limited space
- ◇ Usually used for handling small parts in fully automated systems

Structure

- ◇ (1) Vacuum supply valve
- ◇ (2) Vacuum release valve
- ◇ (3) Vacuum Pressure switch
- ◇ (4) Vacuum release adjusting valve
- ◇ (5) Air supply port
- ◇ (6) Silencer
- ◇ (7) Vacuum port
- ◇ (8) Vacuum filter
- ◇ (9) DIN guide rail installation



Vacuum Generator

AZK

AZX

AZD

AGS

AGB

AGP

AGX

AGE

ABM/ABX

ABM/ABX
组合式

AMC

AM/AL/AH

AM/AL
组合式

AMD

AZW

AZR

ABT

ABP

ABQ

AEVC

AZL

AZH

AZU

ACV

ASBP

ALS

ACP

ACPF

ACPS

APB

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How to order

AZK - S × 8 - NO - N - D
 ① ② ③ ④ ⑤ ⑥

① Series	② Vacuum cartridge specification	③ Stack	④ Control valve specification
AZK	S - Low vacuum level type	Nil - Single body	Nil - Supply valve NC + release valve NC
	X - High vacuum level type	2	NO - Supply valve NO + release valve NC
	P - Low air supply pressure and high vacuum level type	3	(lead wire length 300mm, power supply DC24V)
	L - Large flow type	8	

⑤ Vacuum switch	⑥ Bracket
Nil - Without vacuum switch	Nil - Single air supply, without bracket
N - NPN, without energy saving function	F - Single air supply, with bracket(single body)
P - PNP, without energy saving function	D - Single air supply, guide rail installation(integrated)
NE - NPN, with energy saving function	DP - Centralized air supply, guide rail installation(integrated)
PE - PNP, with energy saving function	

◇ Note: 1. Only NE/PE are with check valve for energy saving, others are without check valve
 2. Energy saving function is not optional for L-large flow type

Technical parameters

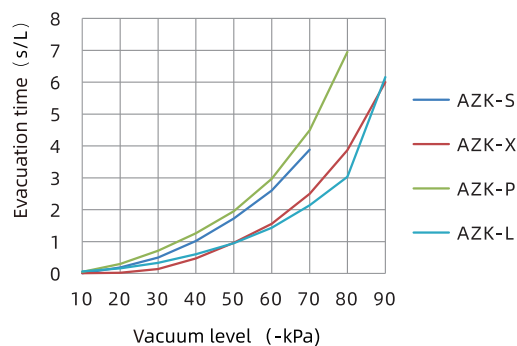
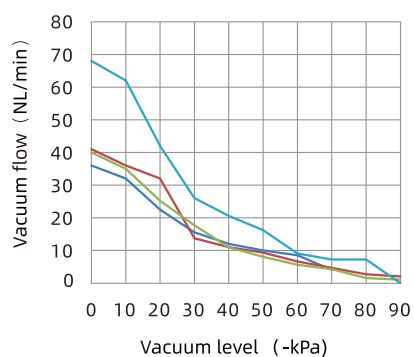
Model	Air supply pressure range bar	Rated air supply pressure bar	Max. vacuum level -kPa	Max. vacuum flow NL/min	Air consumption NL/min	Noise level dB(A)	Without pressure switch	Weight g With pressure switch	Recommended hose dia.(mm)	
									Air supply port P	Vacuum port V
AZK-S	3.0~6.0	6.0	74	44	26	65~70	88.5	102.5	φ6	φ6
AZK-X	3.0~6.0	5.0	91	41	29	65~70	88.5	102.5	φ6	φ6
AZK-P	3.0~6.0	3.7	88	40	32	65~70	88.5	102.5	φ6	φ6
AZK-L	3.0~6.0	5.0	90	68	85	65~70	102	114	φ6	φ8

Vacuum flow(NL/min) at different vacuum levels(-kPa)

Model	Air supply pressure bar	Air consumption NL/min	0	10	20	30	40	50	60	70	80	90	Max. Vacuum level -kPa
AZK-S	6.0	26	44.0	38.0	32.0	22.0	12.0	10.0	8.5	4.0	-	-	74
AZK-X	5.0	29	41.0	36.0	26.0	13.7	11.0	9.3	6.6	4.6	2.7	2.0	91
AZK-P	3.7	32	40.0	35.0	25.2	17.7	10.9	8.0	5.6	4.2	1.5	1.0	88
AZK-L	5.0	85	68.0	62.0	42.0	26.0	20.6	16.2	9.0	7.2	7.2	5.0	90

Evacuation time(s/L) to reach different vacuum levels(-kPa)

Model	Air supply pressure bar	Air consumption NL/min	10	20	30	40	50	60	70	80	90	Max. Vacuum level -kPa
AZK-S	6.0	26	0.01	0.19	0.50	1.02	1.72	2.60	3.88	-	-	74
AZK-X	5.0	29	0.02	0.14	0.47	0.96	1.56	2.50	3.87	6.00	-	91
AZK-P	3.7	32	0.05	0.30	0.71	1.26	1.95	2.97	4.49	6.95	-	88
AZK-L	5.0	85	0.06	0.16	0.33	0.60	0.95	1.43	2.14	3.03	6.16	90



AZK Series

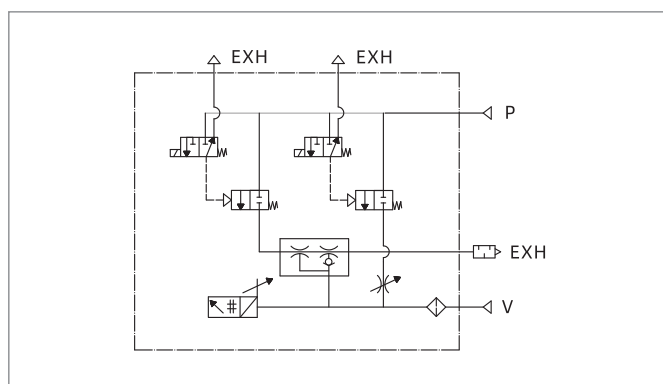
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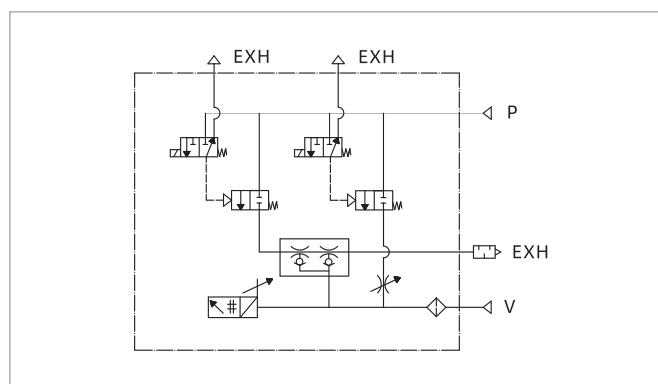
Technical parameters - Pressure switch

Model	ZPDC-□	ZPDC-□-E
Pressure range	-100~100kPa	-100~100kPa
Setting pressure range	-105~105kPa	-105~105kPa
Proof pressure	500kPa	500kPa
General gas	Air, Non-corrosive, non flammable gas	Air, Non-corrosive, non flammable gas
Power supply voltage	24V DC±10%, RIPPLE (P-P) 10% or less	24V DC±10%, RIPPLE(P-P)10%or less
Current consumption	≤40mA(Without load)	≤40mA (Without load)
Switch output Output mode	2NPN or 2PNP open collector output+1~5V linear analog output	1NPN or 1PNP open collector output
Max. load current	125mA	125mA
Max. supply voltage	30V DC (NPN) 24V DC (PNP)	24V DC
Residual voltage	≤1.5V	≤1.5V
Response time	≤2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms, 1500ms selectable)	≤2.5ms (chattering-proof function: 2.5ms, 20ms, 100ms, 500ms, 1000ms, 1999ms selectable)
Output short circuit protection	Yes	OUT switch:Yes;V-Sol/D-Sol:No
Repeatability	±0.2%F.S.±1 digit	
Display	3½LED 7 segment display (Red) display (Sampling rate: 5 times/sec)	
Indicator accuracy	±2% F.S. ±1 digit	
Switch ON indicator	OUT1:Green/OUT2:Red	
Environmental resistance IP Grade	IP40	
Ambient temp.range	Operation: 0~50°C	
Withstand voltage	1000VAC in 1minute (between case and lead wire)	
Insulation resistance	50MΩ min. (at 500V DC, between case and lead wire)	
Temperature characteristic	±2%F.S. (at temperature range of 0~50°C)	
Lead wire	Oil proof PVC cable (0.15mm ²)	

Air circuit schematic diagram

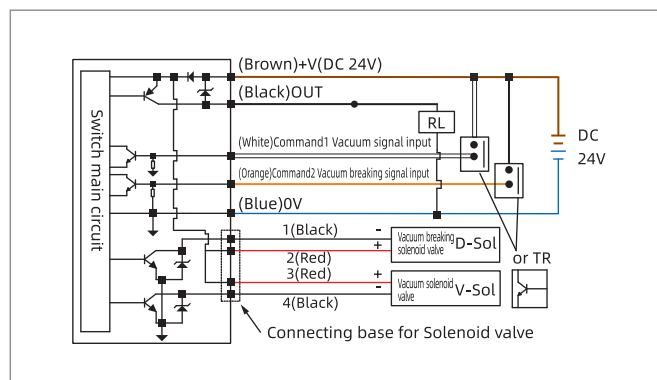


AZK-□-N AZK-□-P

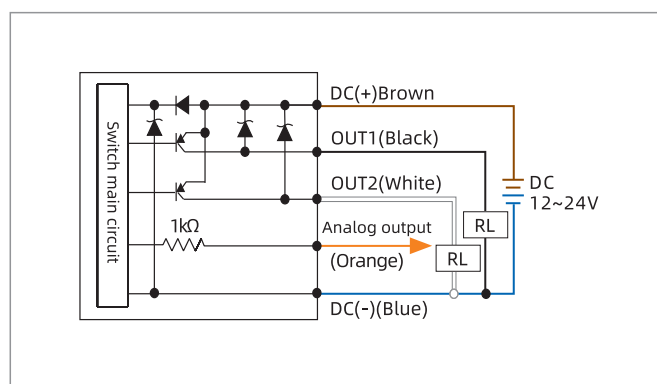


AZK-□-NE AZK-□-PE

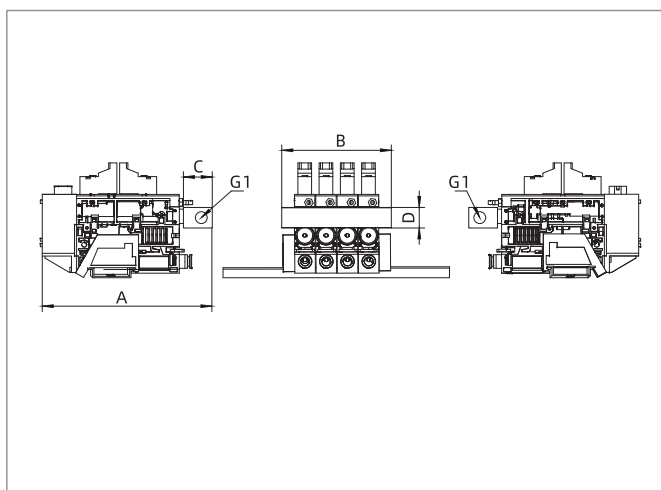
Vacuum Generator



ZPDC-P-E PNP output



ZPDC-P 2PNP+1Analog voltage output(1~5V)



Stack	A	B	C	D	G1
2	124	49	21	15	G1/8
3	124	64.5	21	15	G1/8
4	124	80	21	15	G1/8
5	124	95.5	21	15	G1/8
6	124	111	21	15	G1/8
7	124	126.5	21	15	G1/8
8	124	142	21	15	G1/8

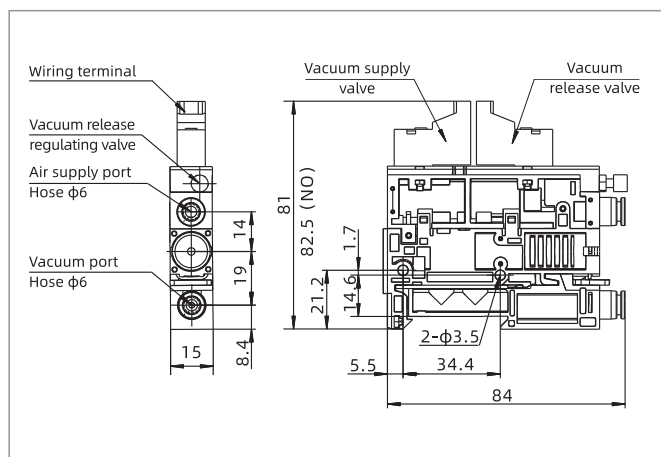
Max.number of manifold stations that can operate simultaneously	AZK-X	AZK-P	AZK-S	AZK-L
Air supply from one side	6	6	6	4
Air supply from both sides	8	8	8	8

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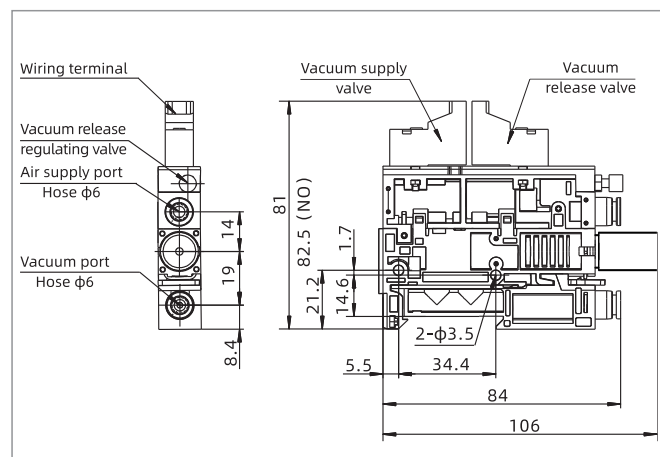
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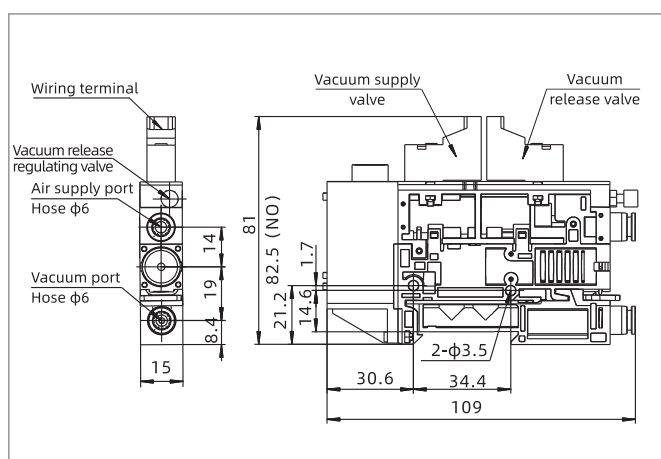
Dimensions(mm)



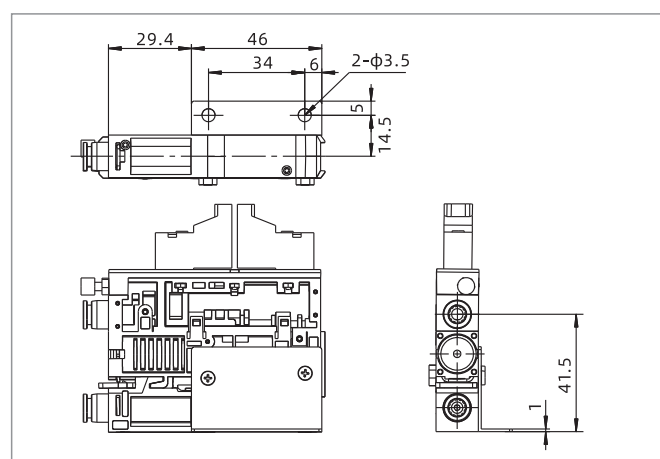
AZK-□ Single body



AZK-L Single body

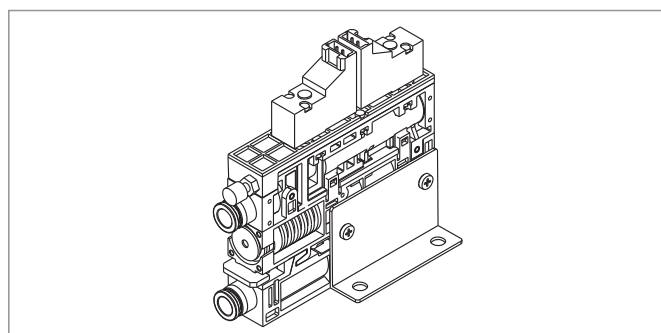


AZK-□-□ Single body with pressure switch

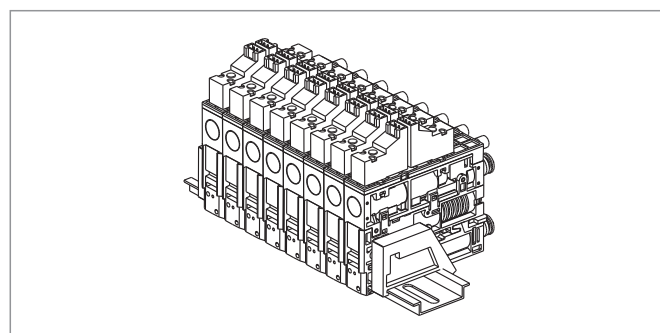


AZK-□-F Single body with mounting bracket

Installation diagram



Mounting with bracket for single body



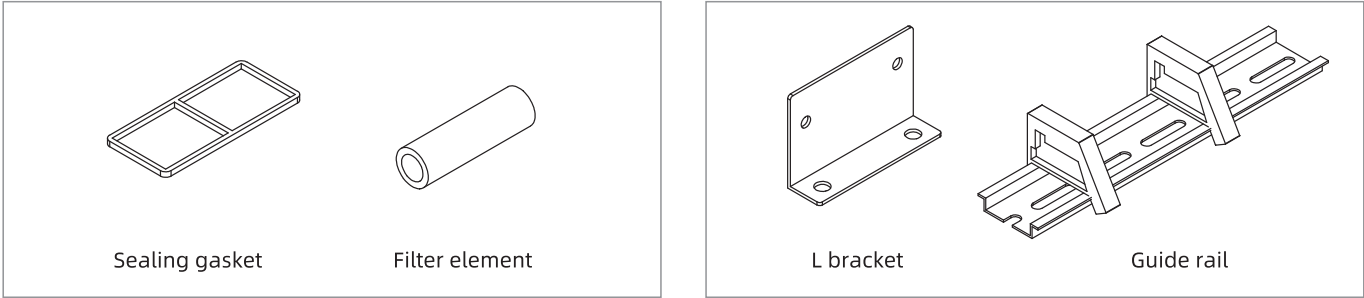
Mounting with DIN guide rail for combined type

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Repair kits



Item	Model	Remark
Filter parts	AZK-FE	Filter element + sealing gasket
Solenoid valve leadwire	AZK-N	Plug lead wire length 300mm
Energy-saving leadwire	AZK-NE	Ends lead wire
Bracket mounting parts	AZK-F	L bracket+M3.5x20screw/nut(2 pcs each)
Guide rail mounting parts(2-3 layers)	AZK-2-D	Length 130mm
Guide rail mounting parts(4-5 layers)	AZK-4-D	Length 165mm
Guide rail mounting parts(6-7 layers)	AZK-6-D	Length 200mm
Guide rail mounting parts(8 layers)	AZK-8-D	Length 235mm

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AZK
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AGE
ABM/ABX
ABM/ABX 组合式
AMC
AM/AL/AH
AM/AL 组合式
AMD
AZW
AZR
ABT
ABP
ABQ
AEVC
AZL
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