

AZK Series

Integrated Vacuum Generator



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

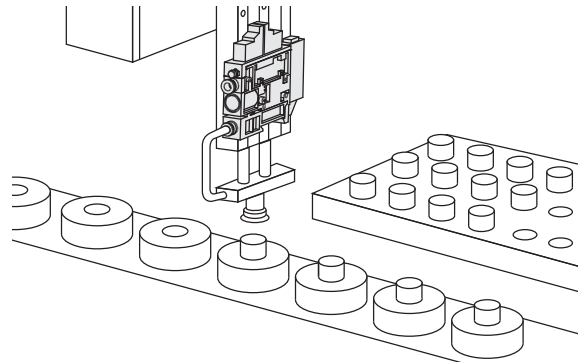
Advantages

- ◇ 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



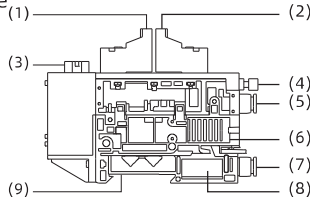
Applications

- ◇ 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



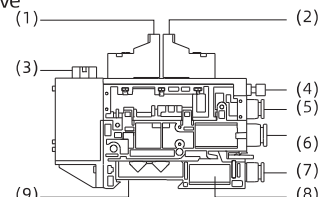
Structure - With vacuum source type (Vacuum generator type)

- ◇ (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



Structure - Without vacuum source type (Vacuum pump type)

- ◇ (1) Vacuum supply valve
- ◇ (2) Vacuum release valve
- ◇ (3) Vacuum pressure switch
- ◇ (4) Vacuum release adjusting valve
- ◇ (5) Air supply port
- ◇ (6) Vacuum pump connector
- ◇ (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 Combined Type
- AMC
- AM/AL/AH
- AM/AL Combined Type
- AMD
- AZW
- AZR
- ABT
- ABP
- ABQ
- AEVC
- AZL
- AZH
- AZU
- ACV
- ASBP
- ALS
- ACP
- ACPF
- ACPS
- APB

AZK Series

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How to order

AZK - S × 8 - NO - N - D
① ② ③ ④ ⑤ ⑥

① Series	② 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	
	B - Vacuum pump type		

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 and B-Vacuum pump type
 3. Centralized air supply is not optional for B-Vacuum pump 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)	Weight g		Recommended hose dia.(mm)		
							Without pressure switch	With pressure switch	Air supply port P	Vacuum pump connector	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
AZK-B	3.0~6.0	-	-	35	-	-	101.5	113.5	φ4	φ6	φ6

- ◇ Note: 35NL/min is the max. allowed passing flow of AZK-B

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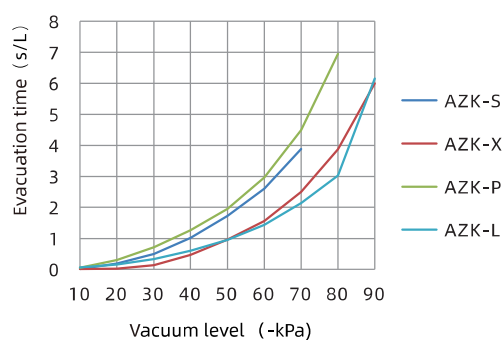
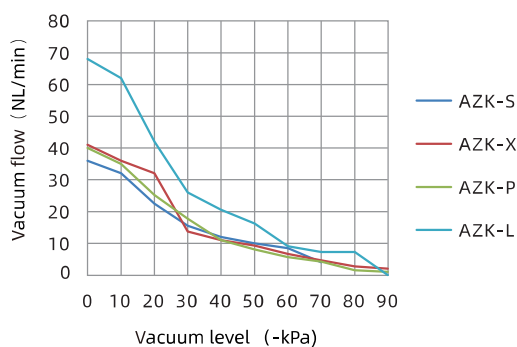


Vacuum flow(NL/min) at different vacuum levels(-kPa)

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



Vacuum Generator

AZK

AZX

AZD

AGS

AGB

AGP

AGX

AGE

ABM/ABX

ABM/ABX Combined Type

AMC

AM/AL/AH

AM/AL Combined Type

AMD

AZW

AZR

ABT

ABP

ABQ

AEVC

AZL

AZH

AZU

ACV

ASBP

ALS

ACP

ACPF

ACPS

APB

AZK Series

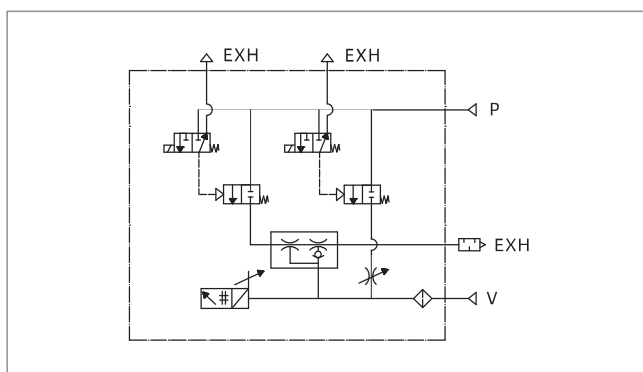
Integrated Vacuum Generator



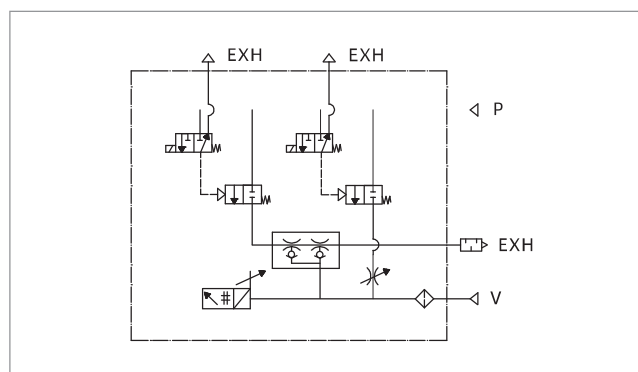
Technical parameters - Pressure switch

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



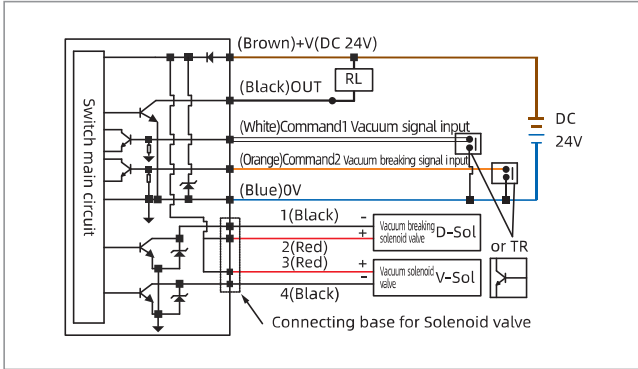
AZK-□-NE AZK-□-PE

AZK Series

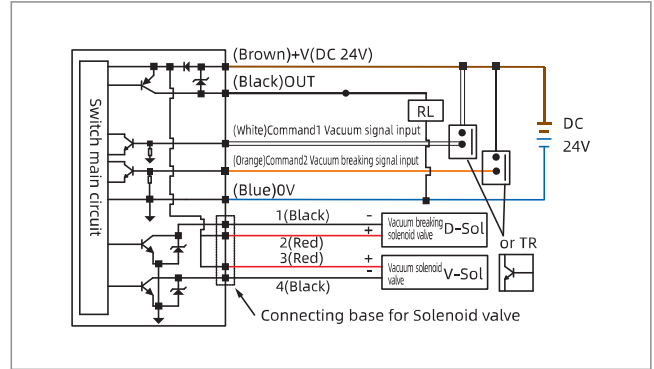
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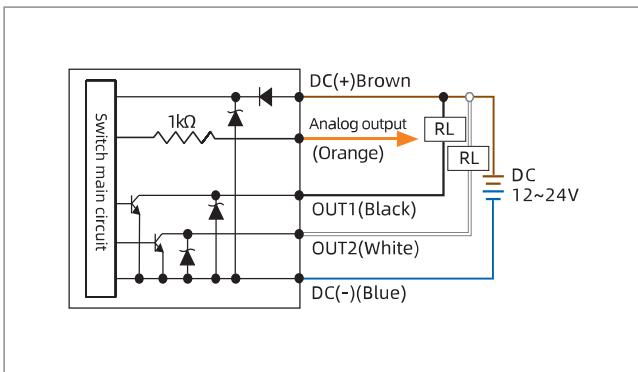
Output circuit wiring diagrams



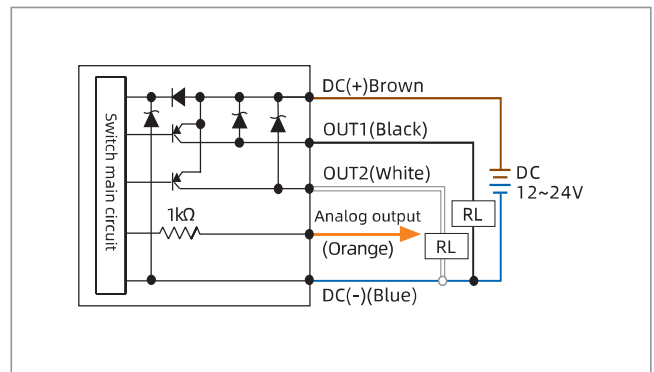
ZPDC-N-E NPN output



ZPDC-P-E PNP output

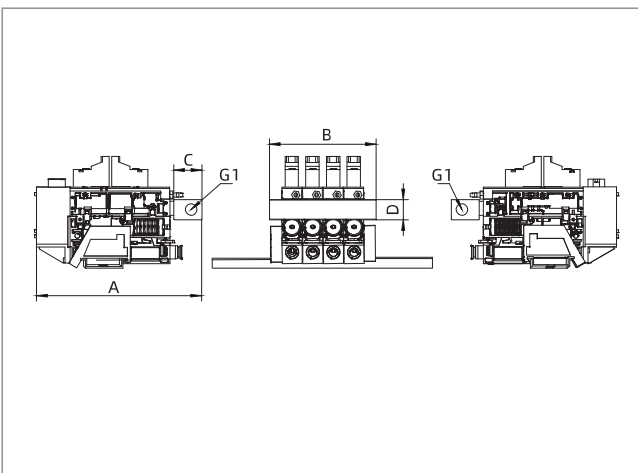


ZPDC-N 2NPN+1Analog voltage output(1~5V)



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

Centralized air supply dimensions(mm)



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

Vacuum Generator

AZK

AZX

AZD

AGS

AGB

AGP

AGX

AGE

ABM/ABX

ABM/ABX Combined Type

AMC

AM/AL/AH

AM/AL Combined Type

AMD

AZW

AZR

ABT

ABP

ABQ

AEVC

AZL

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ACV

ASBP

ALS

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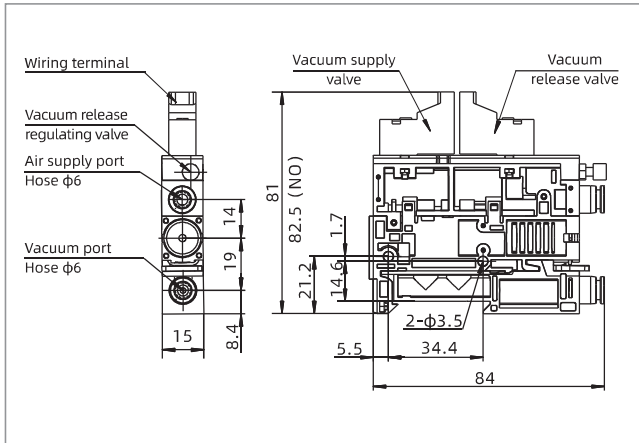
APB

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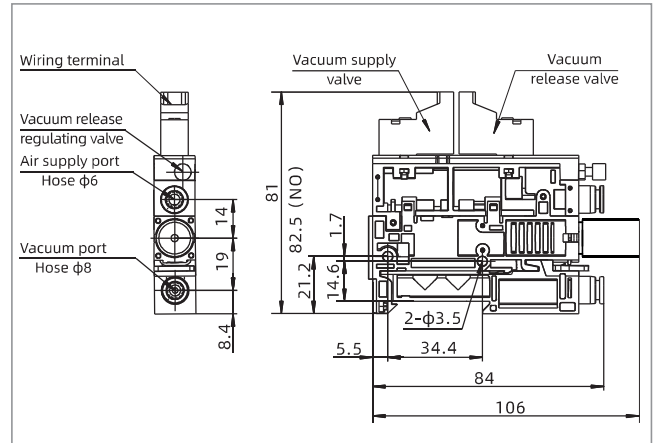
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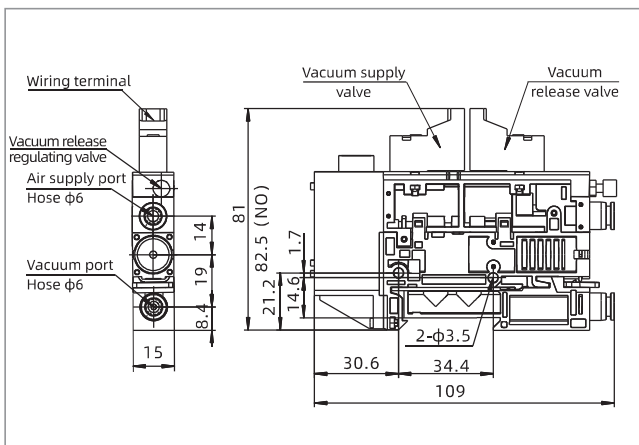
Dimensions(mm)



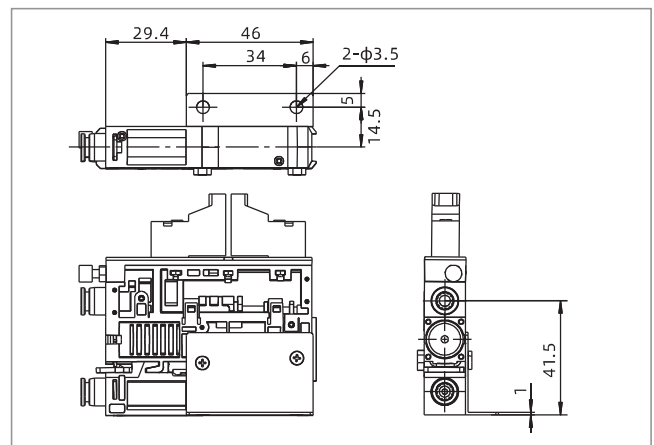
AZK-□ Single body



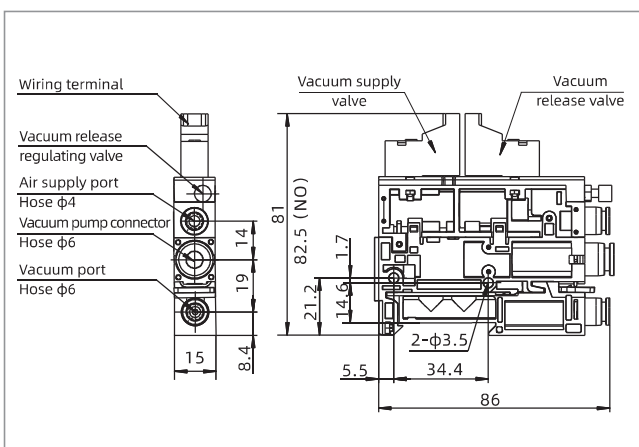
AZK-L Single body



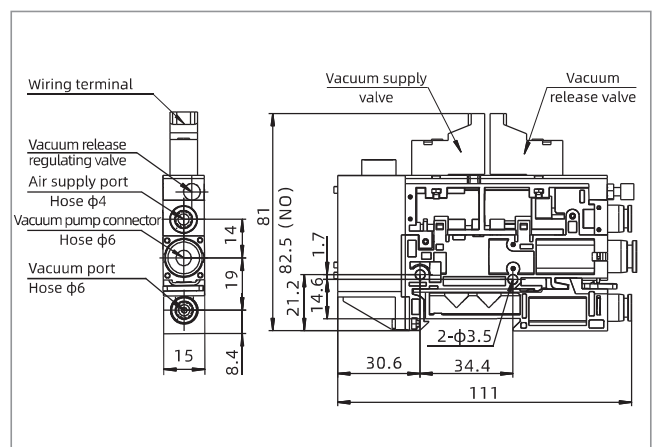
AZK-□-□ Single body with pressure switch



AZK-□-F Single body with mounting bracket



AZK-B Single body



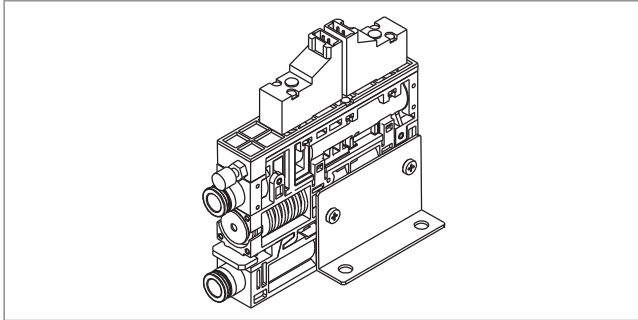
AZK-B-□ Single body with pressure switch

AZK Series

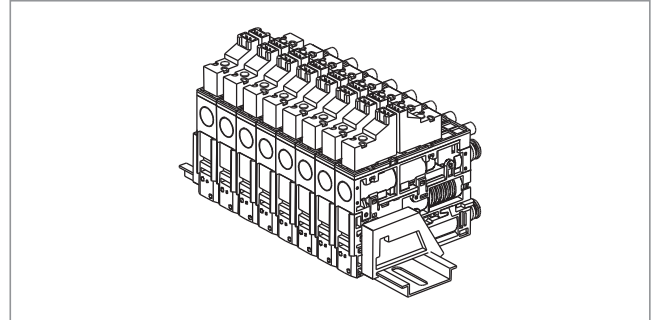
Integrated Vacuum Generator



Installation diagram

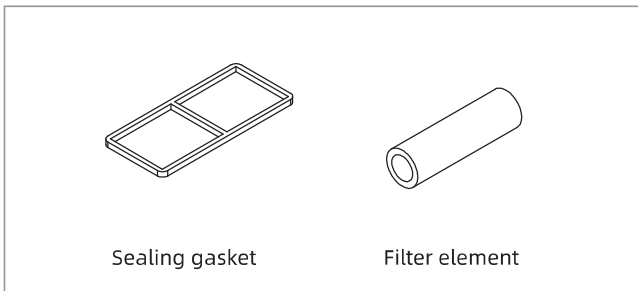


Mounting with bracket for single body



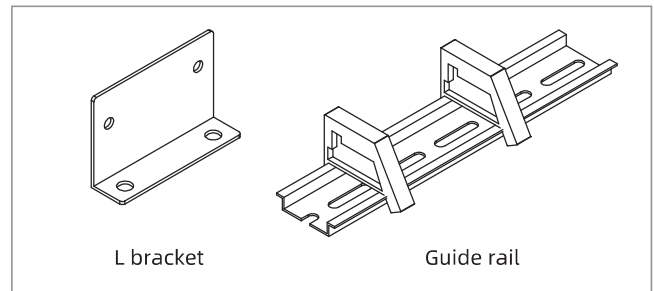
Mounting with DIN guide rail for combined type

Repair kits



Sealing gasket

Filter element



L bracket

Guide rail

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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AGP

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AGE

ABM/ABX

ABM/ABX
Combined Type

AMC

AM/AL/AH

AM/AL
Combined Type

AMD

AZW

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ABT

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AEVC

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