AZQ Series

Mini Integrated Vacuum Generator

ELECTRONICS PACKAGING PLASTIC

Features

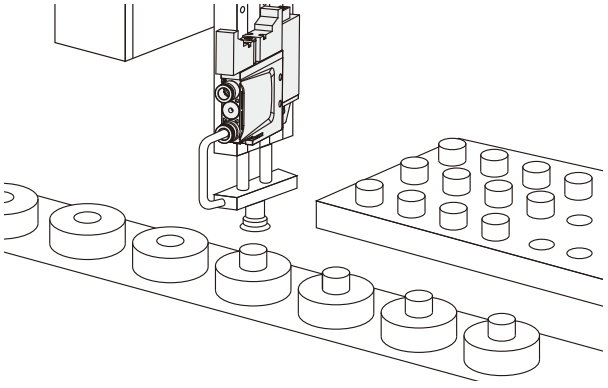
◇ Multi-nozzle design
◇ Small size and light weight. The volume is 43.5cm³
◇ Centralized air supply
◇ No noise (vacuum pump type)
◇ With digital vacuum pressure switch

Advantages

◇ The device is compact and can be installed directly in the handling system
◇ Simple installation, can be installed directly on the distribution box
◇ Vacuum pump type is suitable for centralized vacuum station system

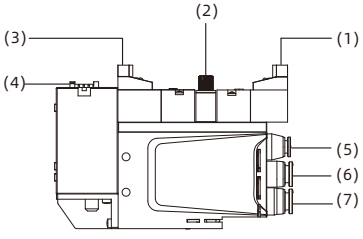
Applications

◇ 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



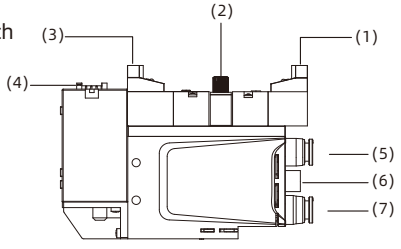
Structure - Without vacuum source type (Vacuum pump type)

◇ (1) Vacuum release valve
◇ (2) Vacuum release adjusting valve
◇ (3) Vacuum supply valve
◇ (4) Vacuum pressure switch
◇ (5) Air supply port
◇ (6) Vacuum pump connector
◇ (7) Vacuum port



With vacuum source type (Vacuum generator type)

◇ (1) Vacuum release valve
◇ (2) Vacuum release adjusting valve
◇ (3) Vacuum supply valve
◇ (4) Vacuum pressure switch
◇ (5) Air supply port
◇ (6) Exhaust port
◇ (7) Vacuum port



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How to order

AZQ - T × 8 - 04 - N - DP
① ② ③ ④ ⑤ ⑥

① Series	② Specifications	③ Stack	④ Vacuum port specification	⑤ Vacuum switch	⑥ Air supply
AZQ	X - High vacuum level type	Nil - Single body	Nil - ϕ6One-touch fitting	N - 2NPN output +	Nil - Individual air supply
	T - Large flow type	2	04 - ϕ4One-touch fitting	1 analog output（1~5V）	DP - Centralized air supply
	B - Vacuum pump type	3		P - 2PNP output +	
		....		1 analog output（1~5V）	
		10		NK - NPN, with centralized wiring function	
				PK - PNP, with centralized wiring function	

◇Note: 1. It is recommended to install an air filter with a filtration accuracy of 5um or less for positive pressure air supply of the vacuum generator (without the need for an oil mist filter)
2. Only concentrated air supply for non-single 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 dB(A)	Weight g	Recommended hose dia.(mm) Air supply port P	Vacuum port V	Vacuum pump connector
AZQ-X	3.0~6.0	5.0	91	12	8.2	64~70	75.4	ϕ6	ϕ4/ϕ6	-
AZQ-T	3.0~6.0	4.5	84	16	15.5	64~70	75.4	ϕ6	ϕ4/ϕ6	-
AZQ-B	3.0~6.0	-	-	40(Note)	-	-	78.2	ϕ4	ϕ4/ϕ6	ϕ6

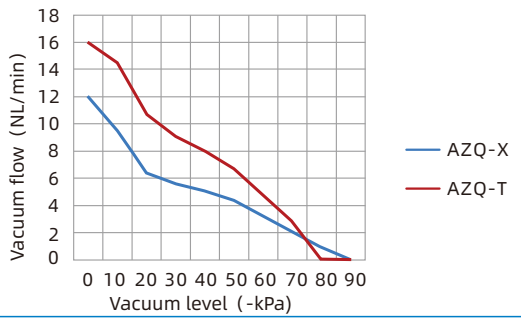
◇ Note: For model AZQ-B-□-□-□-DP, the max. vacuum flow per piece is 15Nl/min

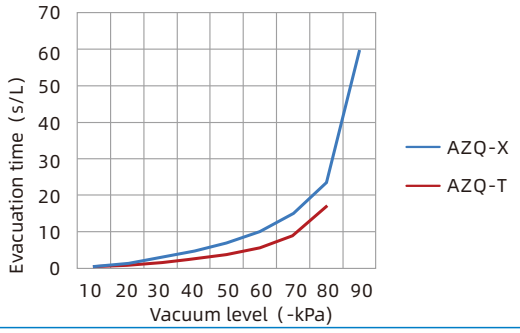
Vacuum flow(NL/min) at different vacuum levels(-kPa)

Model	Air supply pressure bar	Air consumption NL/min	0	10	20	30	40	50	60	70	80	90	Max. vacuum level -kPa
AZQ-X	5.0	8.2	12	9.5	6.4	5.6	5.1	4.4	3.2	2.1	0.9	-	90
AZQ-T	4.5	15.5	16	14.5	10.7	9.1	8.0	6.7	4.8	2.8	-	-	84

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
AZQ-X	5.0	8.2	0.49	1.37	2.90	4.70	6.98	10.03	14.90	23.20	59.52	90
AZQ-T	4.5	15.5	0.34	0.76	1.51	2.40	3.76	5.61	8.94	16.86	-	84





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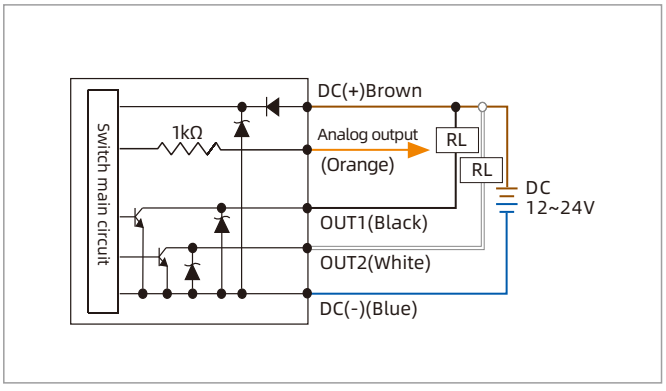
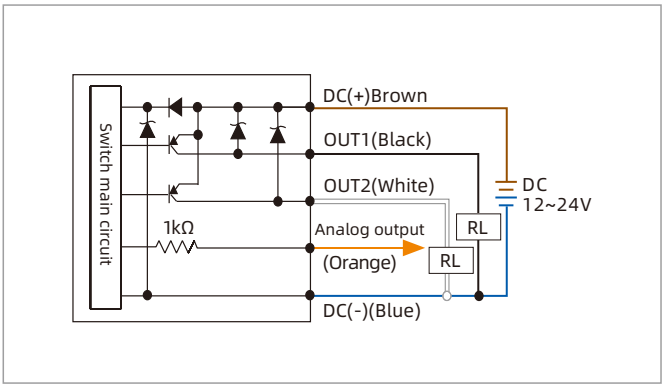
Technical parameters - Pressure switch

Model		ZPDC-□
Pressure range		-100~100kPa
Setting pressure range		-105~105kPa
Proof pressure		500kPa
General gas		Air,Non-corrosive, non flammable gas
Power supply voltage		12-24V DC±10%, RIPPLE（P-P）10% or less
Current consumption		≤40mA(Without load)
Switch output	Output mode	2NPN or 2PNP open collector output+1~5V linear analog output
	Max. load current	125mA
	Max. supply voltage	30V DC (NPN) 24V DC (PNP)
	Residual voltage	≤1.5V
	Response time	≤2.5ms (chattering-proof function: 25ms, 100ms,
		250ms, 500ms, 1000ms, 1500ms selectable)
	Output short circuit protection	Yes
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 At ambient temperature：25±3℃
Switch ON indicator		OUT1:Green/OUT2:Red
Environmental resistance	IP Grade	IP40
	Ambient temp.range	Operation：0~50℃
	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℃）
Lead wire		Oil proof PVC cable（0.15mm²）

Output circuit wiring diagrams



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



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

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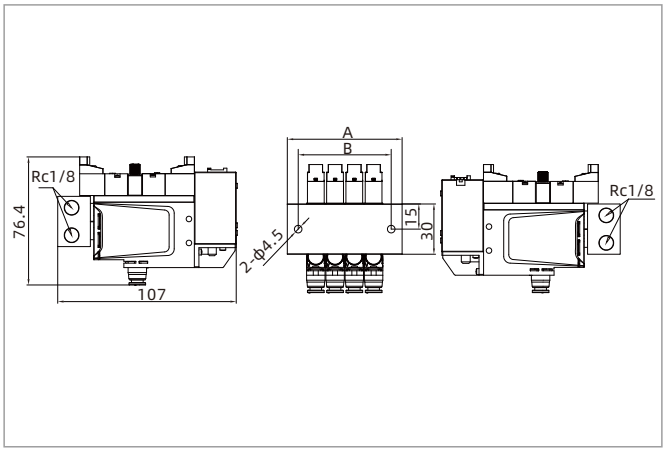
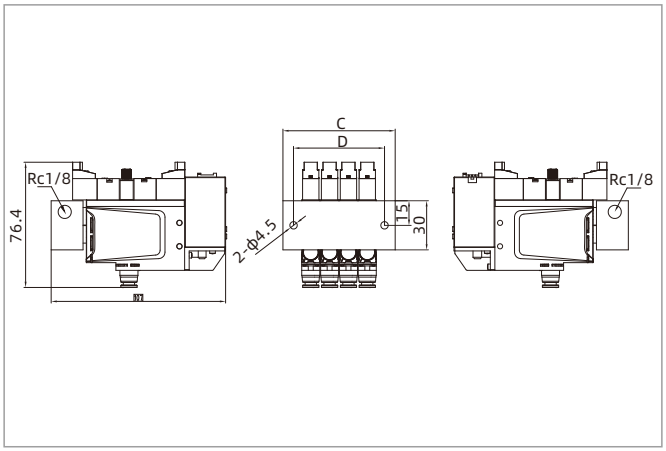
Centralized air supply dimensions(mm)



Vacuum pump type

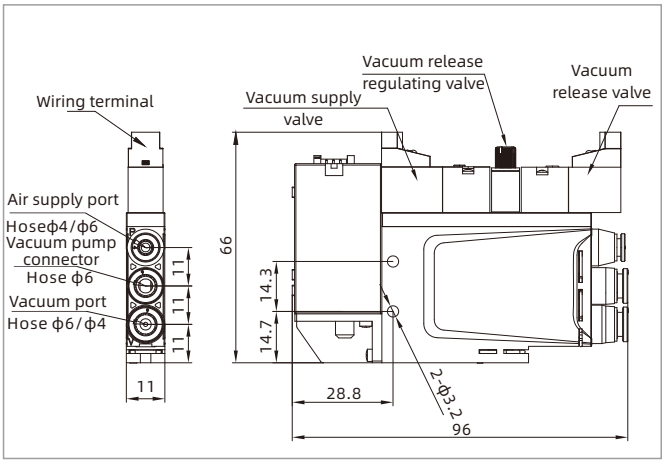


Vacuum generator type

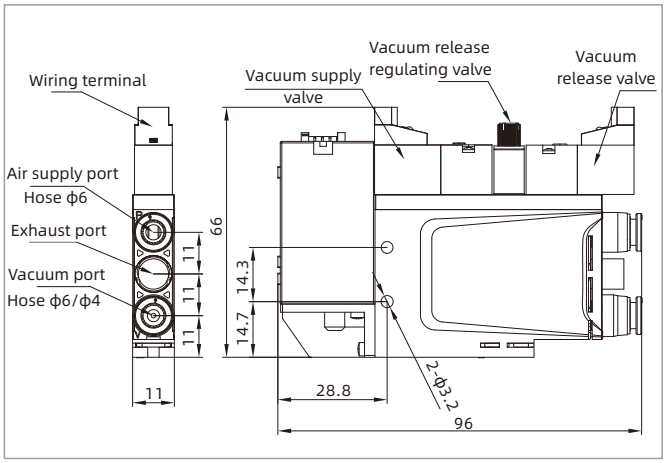
Stack	A	B	C	D
2	45.5	32.5	45.5	32.5
4	68.5	55.5	68.5	55.5
6	91.5	78.5	91.5	78.5
8	114.5	101.5	114.5	101.5
10	-	-	137.5	124.5

◇Note: 1. 31NL/min is the max.allowed passing flow of single stack of AZQ-Bx7
2. 28NL/min is the max.allowed passing flow of single stack of AZQ-Bx8
3. AZQ-X/T/B dual integrated vacuum generator is a standard product, while using single piece with dual centralized gas supply, vacant port should be blocked.
4. While using 5 pieces or more AZQ-B for integrating, recommend air supply on both sides

Dimensions(mm)



AZQ-B-□ Single body of vacuum pump type



AZQ-□-□ Single body of vacuum generator type