

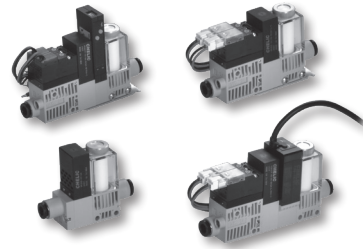
VK20 series Filter Type Vacuum Ejector/ All-in-One

Product features

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Feature

- Modularization: Simple structure can be changed easily.
- Fitting design, easy piping.
- Visualization: Digital display of pressure sensor which can visualiz by monitor.
- Multi-function: Vacuum ejector combined with breaking solenoid valve also with vacuum filter and silencer.
- It can be instal upright or sideways; Simple structure, easy installation and disassembly.



Specification

Item	Model	VK20B	VK20S	VK20T	VK20ST
Fluid					
Pressure range	MPa (kPa)	0.25 ~ 0.7 (250~700)			
Proof pressure	MPa (kPa)	0.5 (500)			
Vacuum value	kPa(mmHg)	-91.8 (-690)			
Nozzle diameter	mm	0.5, 0.7, 1.0			
Max. suction flow	L/min	22			
Ambient and fluid temperature	°C	5~60			
Material	Body	Copper (Nickel plating)			
	Plastic	NYLON、PBT			
Port size	ømm	6			
Valve type		SR2 - 100			
Rated voltage	V	24 ± 10%VDC			
Power consumption	W	1.4			

Pressure switch specification

Item	Model	PSV-15
Rated pressure range	kPa	- 101 to 0
Withstand Pressure	kPa	500
Applicable Fluid		Filtered air, Non-corrosive/ Non-flammable gas
Set Pressure Range		12 to 24VDC ± 10%, Ripple (P-P) 10 % or less
Withstand Pressure		5 ms or less
Power supply v oltage		± 1% F.S. or less
Current consumption		1 Output: NPN & PNP: 21mA MAX., 2 Output: 25mA MAX.
Repeatability	Enclosure	IP40
	Ambient temp. range	Operation: 0 ~ 50 ° C, Storage: -20 ~ 60 ° C (No c ondensation or fr eezing)
	Ambient humidity range	Operation/ Storage: 35 ~ 85 % RH (No c ondensation)
	Withstand voltage	1000 VAC 1-min (between case and le ad wire)
	Insulation	≥ 50 MΩ (a t 500 V DC be tween case and le ad wire)
	Vibration	Total amplitude 1.5 mm or 10 G, 10 Hz ~ 55 Hz ~ 10 Hz sc an for 1 minut e, two hours each direction of X, Y and Z
Impact	980 m/s ² (100 G), 3 times e ach in dir ection of X, Y and Z	
Temperature characteristic		± 3% F.S. or less (Temperature: 25 ± 3° C)
Weight	g	50g (With 1 meter lead wire)

Pressure switch specification

Item	Model	PST 2	
Rated pressure range	kPa	- 100.0~0	
Pressure range	kPa	-100.0~100.0	
Withstanding pressure	kPa	500	
Applicable fluid		Filtered air, Non-corrosive, Non-flammable gas	
Set pressure resolution		0.1kPa、0.001kgf/cm ² 、0.001bar、0.01psi、0.1inHg、1mmHg	
Power voltage		12 to 24V DC ± 10%, Ripple ≤ 10%	
Current consumption	mA	≤ 40(With no load)	
Switch output	output	2 NPN or 2 PNP open collector	
	Max. Load Current	80mA	
	Power voltage	24VDC	
	Residual Voltage	≤ 1.5V	
	Response time ms	≤ 2.5(Chattering-proof function: 25, 100, 250, 500, 1000 and 1500 selectable)	
Linear analogy output	Voltage	Output Voltage	1~5V ± 2.5%F.S.
		Output Impedance	Approx. 1kΩ
	Linearity		± 1%F.S.
Display	Display	4-digit, 7-step display (green)	
	Switch on indicator	OUT1 green/OUT2 green	
	Renewing	Approx. 0.2 sec	
	Indicator accuracy	± 0.2% F.S. ± 1 digit (Temperature: 25 ± 3° C)	
Repeatability		± 0.2% F.S. ± 1 digit	
Environmental Resistance	Enclosure	IP40	
	Ambient Temp. Range	0~50° C (No condensation or freezing)	
	Ambient Humidity Range	Operation / Storage : 35 ~ 85 % RH (No c ondensation)	
	Withstand Voltage	1000 V AC in 1-min (between case and le ad wire)	
	Insulation	≥ 50 MΩ (a t 500 V DC, be tween case and le ad wire)	
	Vibration	Total amplitude 1.5 mm , 10 Hz ~ 55 Hz sc an for 1 minute, two hours each direction of X, Y and Z	
Impact	980 m/s ² (100G), 3 times each in direction of X, Y and Z		
Temperature Characteristic		± 2% F.S. (within 0~50° C temperature range)	
Lead wre		oil-resistant cable (0.14 mm ²)	
Weight (With 1 Meter Lead Wire)	g	33	

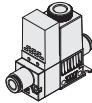
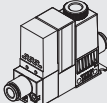
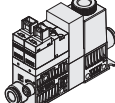
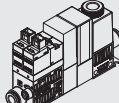
VK20 series Filter Type Vacuum Ejector/ All-in-One

Code of order

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Code of order **VK20 ST - 10 - 06 - DC24 - L - P01 - 1 - C**

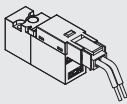
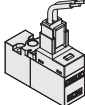
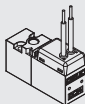
1 2 3 4 5 6 7 8

1	Mark	B	S	T	ST
Combination		Vacuum ejector + Filter	Vacuum ejector + Filter + Pressure switch	Vacuum ejector + Filter + Solenoid valve	Vacuum ejector + Filter + Solenoid valve + Pressure switch
Image					

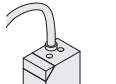
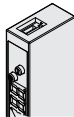
2	Mark	Nozzle diameter (mm)
	05	0.5
	07	0.7
	10	1.0

3	Mark	Port size (mm)
	06	Ø6

4	Mark	Voltage
	None	Without control valve
	DC12	DC 12, 1.2 W
	DC24	DC 24, 1.2 W

5	Mark	Electrical entry
	None	Without control valve
	L	
	T	
	W	

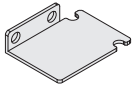
● With wire length 300mm

6	Mark	Output	Image
	None	Without pressure switch	—
	P01	NPN output	
	P02	PNP output	
	P03	2 NPN output	
	P04	2 NPN output + Analog output (1-5 V) numeric type	
	P05	2 PNP output + Analog output (1-5 V) numeric type	

● P04, P05 with wire length 1 M

7	Mark	Connector
	None	Without pressure switch
	1	With wire length 100mm
	QD	M8 Male(P04/P05 without)

● Only available to P01 - 02 - 03

8	Mark	Bracket
	None	No bracket
	C	

● Vacuum ejector VK20 optional correspondence table:

Model	1	2	3	4	5	6	7	8
	Combination	Nozzle diameter	Port size	Voltage	Electrical entry	Output	Connector	Bracket
VK20	B	05 07 10	06	—	—	—	—	C
	S					P01 P04	1 QD	
	T					—	—	
	ST					DC12 DC24	L T W	

EV

EVM

VA □

VM □

VM □ U

VHS

VSL

VKM

VKMT

VCK

VK20 □

VK30 □

VQ20 □

VFD

VFM

VFU

ERV

ERVL

MVS

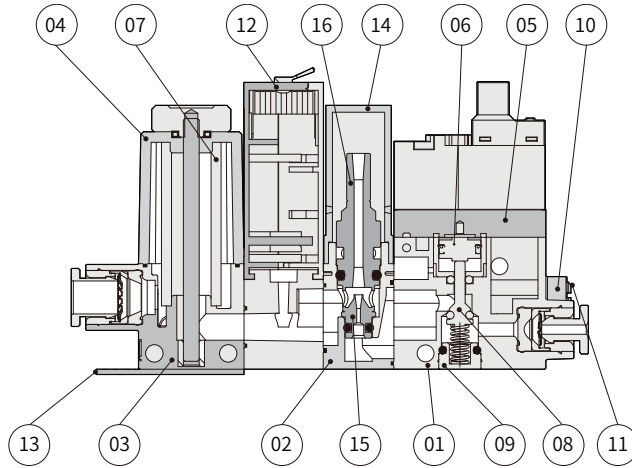
DYC

VK20 series Filter Type Vacuum Ejector/ All-in-One

Product features

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Internal structure



Components and Material list

No.	Item	Material	No.	Item	Material
01	Main body	Nylon fiber	09	Valve spring seat	Copper alloy
02	Vacuum ejector	Nylon fiber	10	Throttle seat	Copper alloy
03	Silencer	Nylon fiber	11	Throttle screw	Copper alloy
04	Filter cap	PC	12	Pressure switch	-
05	Manifold board	Aluminum alloy	13	Mounting bracket	Aluminum alloy
06	Piston	Copper alloy	14	Filter cap	Nylon fiber
07	Silencer filter	EA30	15	Exhaust nozzle	Copper alloy
08	Filter cap	Aluminum alloy	16	Exhaust pipe	Copper alloy

Product weight

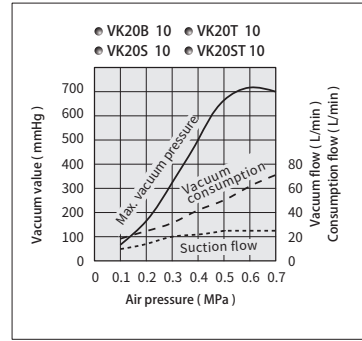
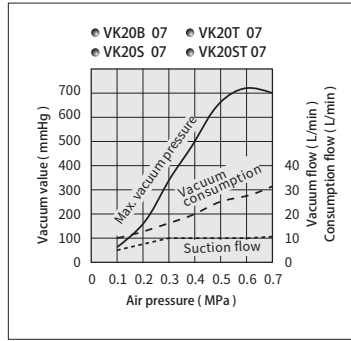
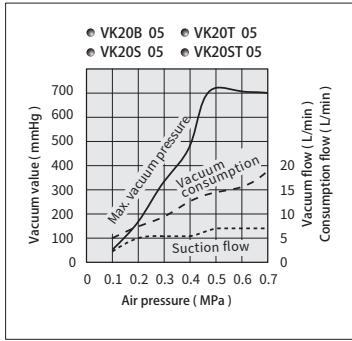
Model	VK20			
Specification	B	S	T	ST
Weight(g)	40	80	90	170

VK20 series Filter Type Vacuum Ejector/ All-in-One

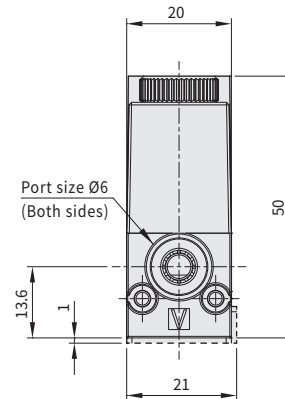
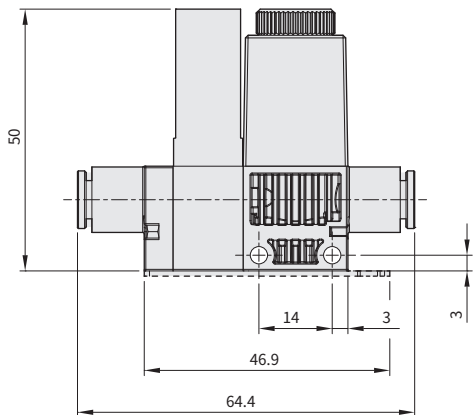
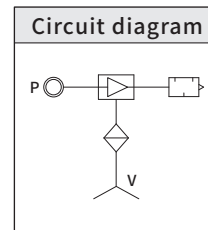
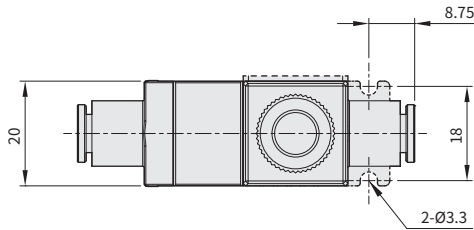
Characteristic graph/ Dimensions

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Flow rate characteristic graph



VK20 **B** - **10** - **06** - **C**



EV

EVM

VA

VM

VM U

VHS

VSL

VKM

VKMT

VCK

VK20

VK30

VQ20

VFD

VFM

VFU

ERV

ERVL

MVS

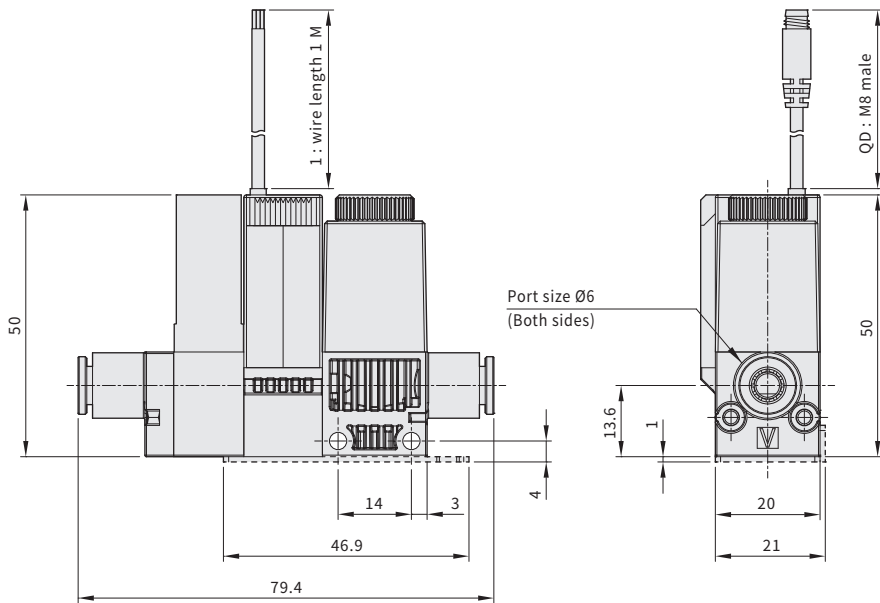
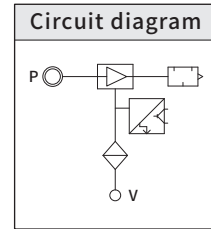
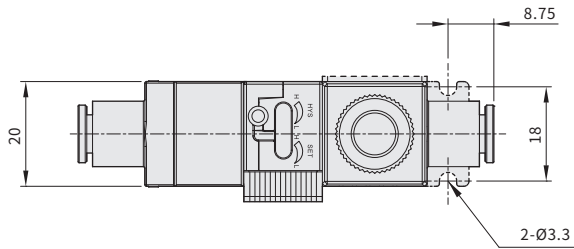
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VK20 series Filter Type Vacuum Ejector/ All-in-One

Dimensions

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VK20 **S** - **10** - 06 - **P01** - **1** - **C**

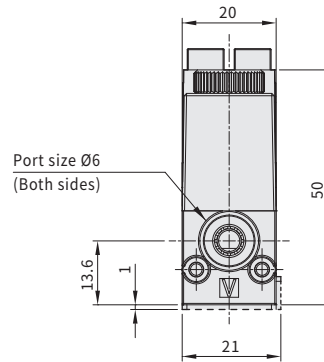
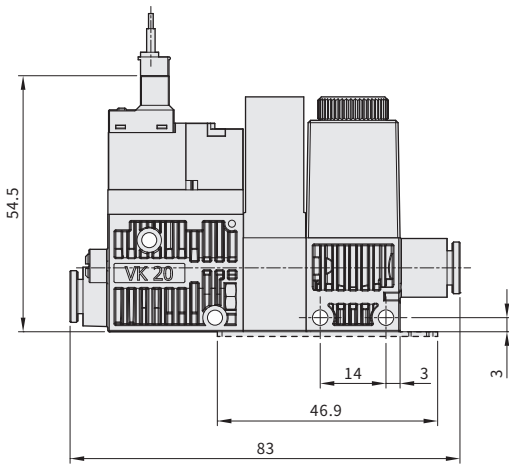
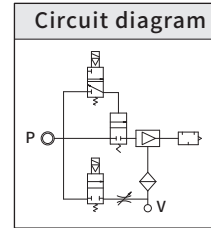
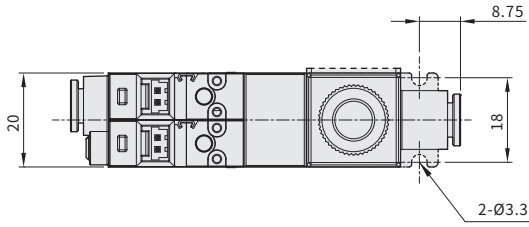


VK20 series Filter Type Vacuum Ejector/ All-in-One

Dimensions

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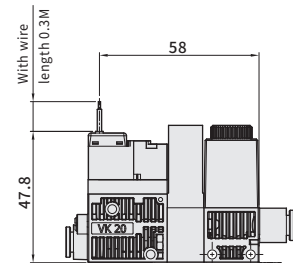
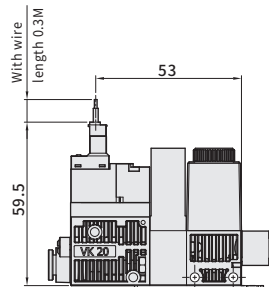
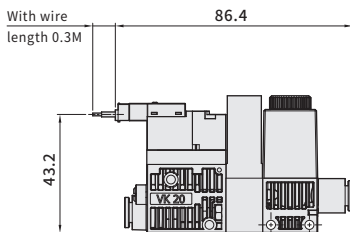
■ VK20 **T** - 10 - 06 - DC24 - **T** - **C**



■ L type - **L**

■ T type - **T**

■ W type grommet - **W**



EV

EVM

VA □

VM □

VM □ U

VHS

VSL

VKM

VKMT

VCK

VK20 □

VK30 □

VQ20 □

VFD

VFM

VFU

ERV

ERVL

MVS

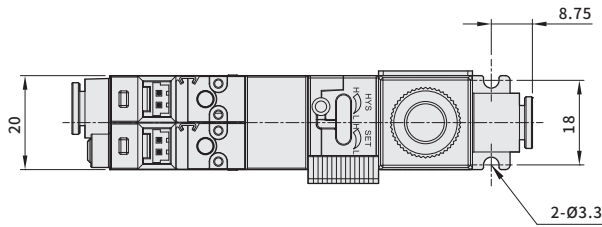
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VK20 series Filter Type Vacuum Ejector/ All-in-One

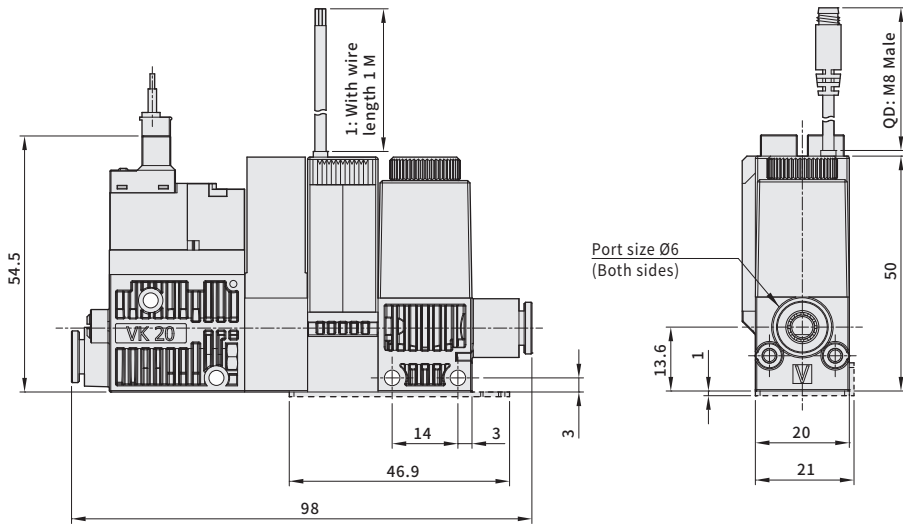
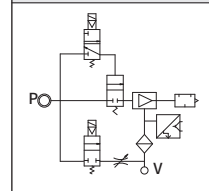
Dimensions

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VK20 **ST** - **10** - **06** - **DC24** - **T** - **P01** - **1** - **C**



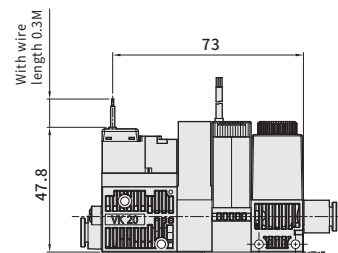
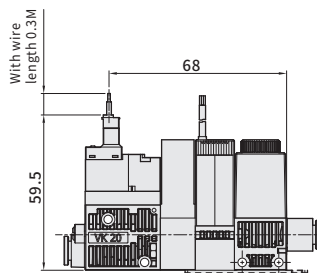
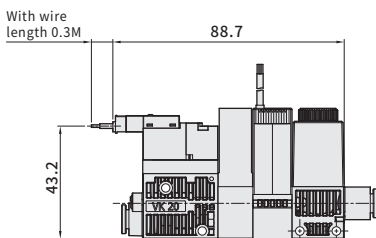
Circuit diagram



L type - **L**

T type - **T**

W type grommet - **W**



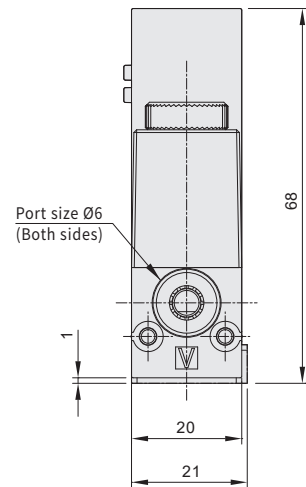
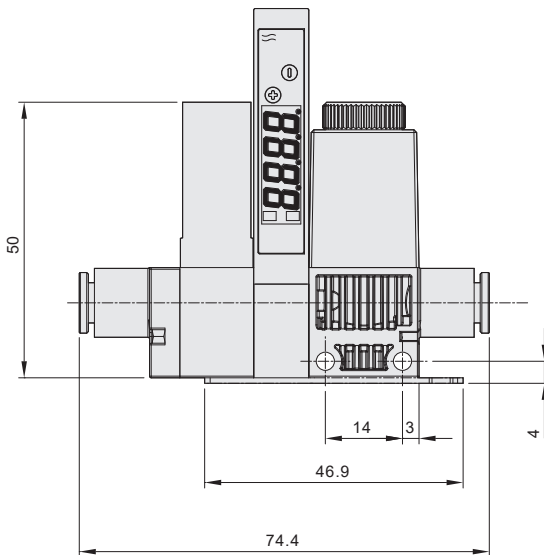
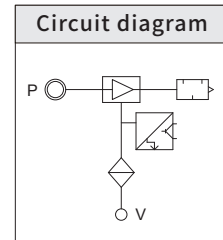
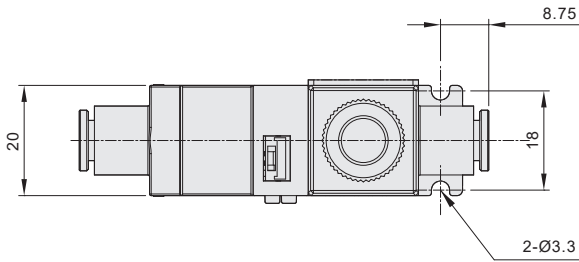
VK20 series Filter Type Vacuum Ejector/ All-in-One

Dimensions

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VK20 **S** - **10** - 06 - **P04** - **C**

Numeric type



EV

EVM

VA

VM

VM U

VHS

VSL

VKM

VKMT

VCK

VK20

VK30

VQ20

VFD

VFM

VFU

ERV

ERVL

MVS

DYC

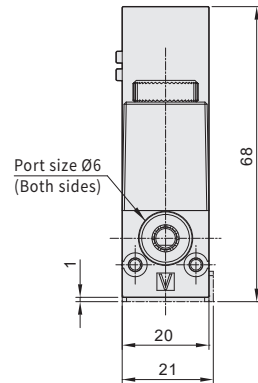
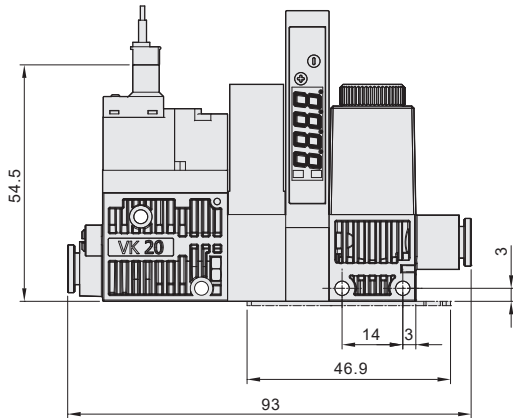
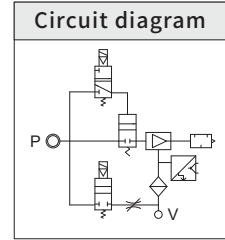
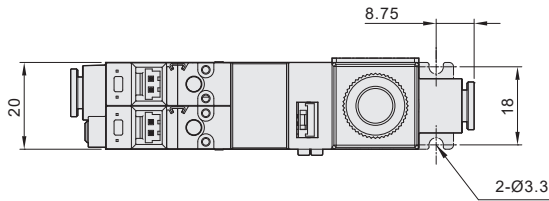
VK20 series Filter Type Vacuum Ejector/ All-in-One

Dimensions

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VK20 **ST** - **10** - 06 - **DC24** - **T** - **P04** - **C**

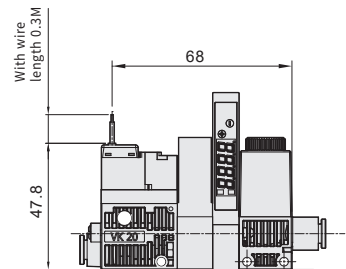
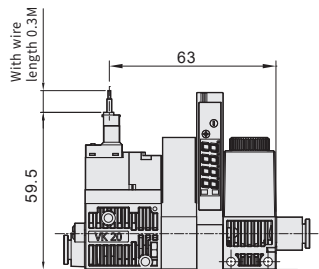
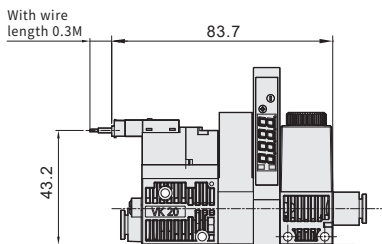
Numeric type



L type - **L**

T type - **T**

W type grommet - **W**



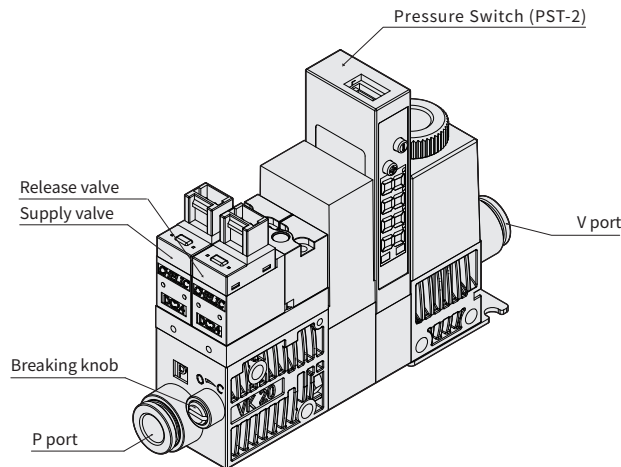
VK20 series Filter Type Vacuum Ejector/ All-in-One

Installation

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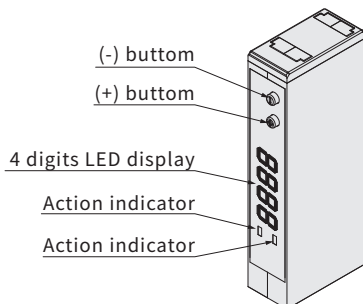
VK 20 Series Vacuum ejector and vacuum breaking instructions

- The supply valve is to control air supply port, release valve is to control the breaking knob.
- The vacuum ejector generates the vacuum only when supply valve starts up.
- By adjusting break knob in clockwise, the vacuum increased; Otherwise counter-clockwise.

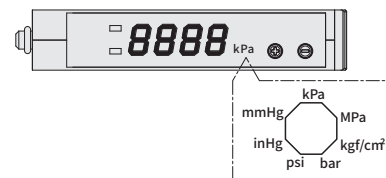


PST2 Numeric Display Pressure Switch Setting Instructions

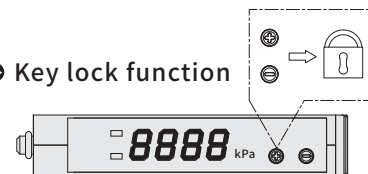
- 2 sets of output & linear analogy output (1~5V)
- Compact size: 50x10x20mm³(L x W x H)
- Key lock function
- Various pressure units available
kPa, MPa, kgf/cm², bar, psi, inHg, mmHg



Various pressure units available



Key lock function



Key lock mode can prevent improper operation to pressure switch.

Key lock mode can pbe activated by pressing + and - for 3 seconds.

EV

EVM

VA □

VM □

VM □ U

VHS

VSL

VKM

VKMT

VCK

VK20 □

VK30 □

VQ20 □

VFD

VFM

VFU

ERV

ERVL

MVS

DYC