

Pilot operated 2 port valve for dust collector control
(pulsejet valve)

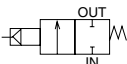
PD3/PDV3 Series

- Air operated type, solenoid valve mounted type
- Port size: Rc3/4, Rc1, IN: Rc1 1/2 - OUT: ø48, Rc1 1/2

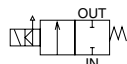


JIS symbol

- PD3
(air operated type)



- PDV3
(solenoid valve mounted type)



Common specifications

Item	Air operated type	Solenoid valve mounted type
	PD3	PDV3
Working fluid	Air (no corrosive gas)	
Min. working pressure dif. MPa	0.1	
Max. working pressure dif. MPa	0.7	
Max. working pressure MPa	0.7	
Withstanding pressure (water) MPa	2.0	
Fluid temperature °C	-10 to 60, -10 to 100 for fluoro rubber seal (no freezing)	
Ambient temperature °C	-10 to 60, -10 to 100 for fluoro rubber seal	
Atmosphere	Place free of corrosive gas and explosive gas	
Valve structure	Pilot operated poppet structure	
Pilot port size	Rc1/8	
Mounting attitude	Free	
Electric specifications		
Rated voltage	100 VAC (50/60 Hz), 110 VAC (60 Hz); 200 VAC (50/60 Hz), 220 VAC (60 Hz); 12 VDC; 24 VDC	
Voltage fluctuation range	-10 to +10% of rated voltage	
Apparent power (VA)	Holding	7.5 (50 Hz), 5.5 (60 Hz)
	Starting	20 (50 Hz), 17 (60 Hz)
Power consumption (W)	AC	4.0 (50 Hz), 3.4 (60 Hz)
	DC	6.5
Heat proof class	B (equivalent to H when using coil option 4A)	

Individual specifications

Item	Port size	Orifice (mm)	Cv flow factor	Weight (kg)
Model no.				
● Air operated type				
PD3-20A	Rc3/4	23	11	0.26
PD3-25A	Rc1	28	18	0.40
PD3-40A	IN: Rc1 1/2 - OUT: $\overset{DD}{\underset{Length S2}{\phi 48}}$	37	45	0.86
PD3-40A-RC	Rc1 1/2	37	45	0.75
● Solenoid valve mounted type				
PDV3-20A	Rc3/4	23	11	0.41
PDV3-25A	Rc1	28	18	0.55
PDV3-40A	IN: Rc1 1/2 - OUT: $\overset{DD}{\underset{Length S2}{\phi 48}}$	37	45	1.01
PDV3-40A-RC	Rc1 1/2	37	45	0.90

*1: High corrosion resistant types, etc. are also available. Consult with CKD. (Custom order)

*2: For a solenoid valve for driving the air operated type PD3, use FAB31-6-3 (page 26), AB31-01-3 (page 130), AB41E4-02-3-03T (explosion proof, page 360) or PUVB (page 690).

*3: The combination of PD3 and PUVB is recommended for outdoors.

*4: Consult with CKD when using the valve at a garbage incineration plant for smoke treatment, or in a dust collector for combustible gas, etc.

How to order

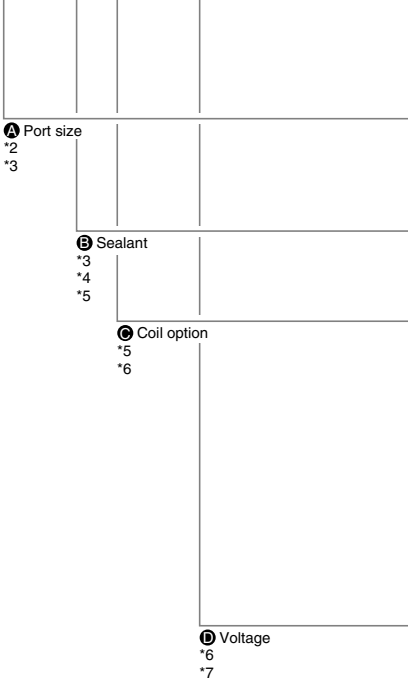
- Air operated type

PD3 - **20A** - **N**

- Solenoid valve mounted type

PDV3 - **20A** - **N** **2C** - **AC100V**

Model no.



<Example of model number>

PDV3-20A-2C-AC100V

Model no.: PDV3

- A** Port size : Rc3/4
- B** Sealant : Urethane rubber
- C** Coil option : Grommet lead wire
- D** Voltage : 100 VAC (50/60 Hz), 110 VAC (60 Hz)

		Model no.	
		P D 3	P D V 3
Symbol	Descriptions		
A Port size			
20A	Rc3/4	●	●
25A	Rc1	●	●
40A	IN: Rc1 1/2, OUT: OD ø48 length 52	●	●
40A-RC	Rc1 1/2	●	●
B Sealant			
Blank	Urethane rubber	●	●
N	Nitrile rubber	●	●
F	Fluoro rubber	●	●
C Coil option			
2C	Std. Grommet lead wire		●
2CS	Grommet lead wire + surge suppressor		●
2E	DIN terminal box (G1/2)		●
2ES	DIN terminal box + surge suppressor (G1/2)		●
2G	DIN terminal box (Pg11)		●
2H	DIN terminal box + light (Pg11)		●
2HS	DIN terminal box + light + surge suppressor (Pg11)		●
2CG	Conduit (CTC19)		●
2CH	Conduit (G1/2)		●
3T	T type terminal box (G1/2)		●
3R	T type terminal box light (G1/2)		●
3RS	T type terminal box + light + surge suppressor (G1/2)		●
4A	Grommet lead wire (equivalent to heat proof class H)		●
D Voltage			
AC100V	100 VAC (50/60 Hz), 110 VAC (60 Hz)		●
AC200V	200 VAC (50/60 Hz), 220 VAC (60 Hz)		●
DC24V	24 VDC		●
DC12V	12 VDC		●

- *1: The combinations indicated with ● in the above table are available.
- *2: Pipe plug-in method is available for 20A. Consult with CKD. (Custom order)
- *3: For **Blank**, blank (sealant: urethane rubber) is not available when port size is 40A or 40A-RC.
- *4: When **B** is N or F (sealant: nitrile rubber or fluoro rubber), the main valve material is nylon resin. Consult with CKD about other materials. (Custom order)
- *5: For PDV3 Series, when **B** is F (sealant: fluoro rubber), only 4A is available for **C** (coil option).
- *6: When **C** (coil option) is 4A, only AC voltage is available.
- *7: For voltages other than above, consult with CKD.

HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

AB

AG

AP/
AD

APK/
ADK

For
dry air

Explosion
proof

HVB/
HVL

SAB/
SVB

NP/NAP/
NVP

CHB/G

MXB/G

Other G.P.
systems

PD/FAD/
P.J

CVB/
CVSE

CPE/
CPD

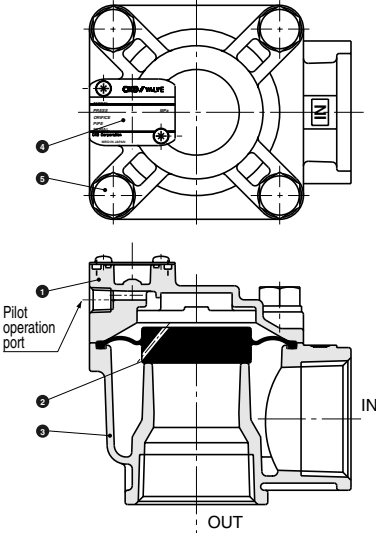
Medical
analysis

Custom
order

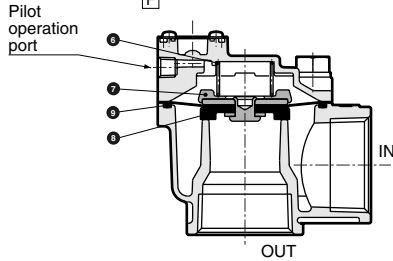
For dust collector control
Fluid control components for air blow

Internal structure and parts list: Air operated type

- Sealant: Urethane rubber
PD3-20A/25A



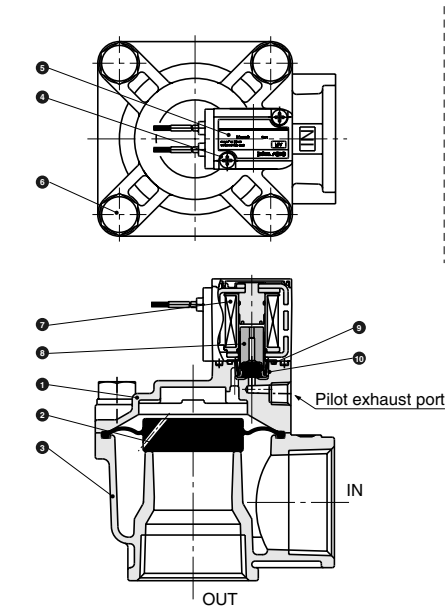
- Sealant: Nitrile rubber, fluoro rubber
PD3-20A/25A/40A-N F *1
PD3-40A-RC-N F



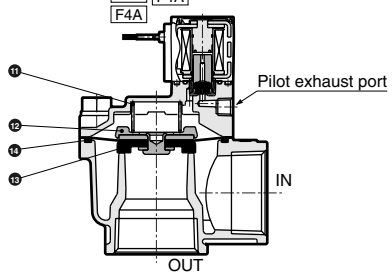
No.	Parts name	Material
1	Cover	ADC12 Aluminum die casting
2	Diaphragm	U Urethane rubber
3	Body	ADC12 Aluminum die casting
4	Name plate	A1200P Aluminum
5	Hexagon head bolt	SUS304 Stainless steel
6	Spring	SUS304 Stainless steel
7	Spacer	PA Nylon resin
8	Diaphragm assembly	SUS304, PA Stainless steel, nylon resin NBR or FKM Nitrile rubber or fluoro rubber
9	O ring	NBR or FKM Nitrile rubber or fluoro rubber

Internal structure and parts list: Solenoid valve mounted type

- Sealant: Urethane rubber
PDV3-20A/25A-2C (grommet lead wire type)




- Sealant: Nitrile rubber, fluoro rubber
PDV3-20A/25A/40A-N2C F4A *1
PDV3-40A-RC-N2C F4A

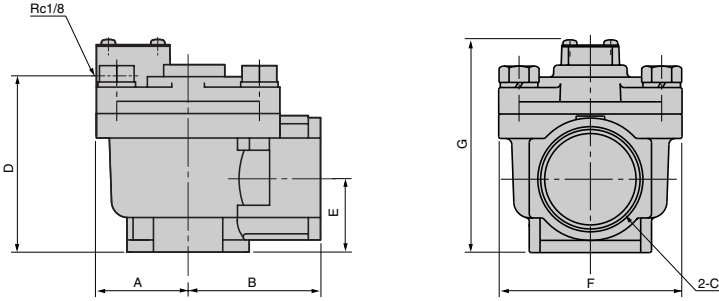


No.	Parts name	Material
1	Cover	ADC12 Aluminum die casting
2	Diaphragm	U Urethane rubber
3	Body	ADC12 Aluminum die casting
4	Spring washer assembled cross headed pan head machine screw	SWCH10R Carbon steel wire for cold forging
5	Name plate	PET Polyethylene terephthalate
6	Hexagon head bolt	SUS304 Stainless steel
7	Coil assembly	Class B molded coil
8	Plunger assembly	K-M31, NBR or FKM Stainless steel, nitrile rubber or fluoro rubber
9	O ring	NBR or FKM Nitrile rubber or fluoro rubber
10	Outer spring	SUS304 Stainless steel
11	Spring	SUS304 Stainless steel
12	Spacer	PA Nylon resin
13	Diaphragm assembly	SUS304, PA Stainless steel, nylon resin NBR or FKM Nitrile rubber or fluoro rubber
14	O ring	NBR or FKM Nitrile rubber or fluoro rubber

Dimensions: PD3 Series

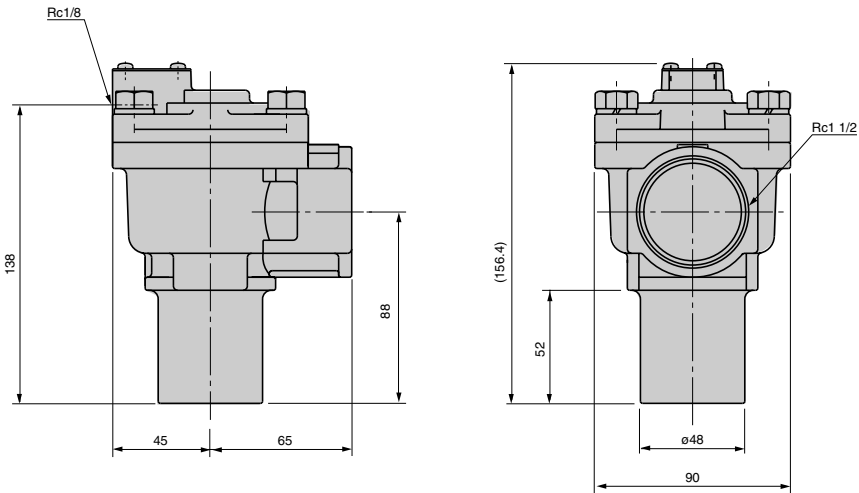
 (Page 698)

- Air operated type
PD3-20A/25A
PD3-40A-RC



Model no.	A	B	C	D	E	F	G
PD3-20A	31.5	40	Rc3/4	64	31	60	82.4
PD3-25A	37.5	45	Rc1	76	39	71	94.4
PD3-40A-RC	45	65	Rc1 1/2	86	36	90	104.4

- Air operated type
PD3-40A



HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

AB

AG

AP/
AD

APK/
ADK

For
dry air

Explosion
proof

HVB/
HVL

SAB/
SVB

NP/NAP/
NVP

CHB/G

MXB/G

Other G.P.
systems

PD/FAD/
P.J

CVE/
CVSE


CPE/
CPD

Medical
analysis

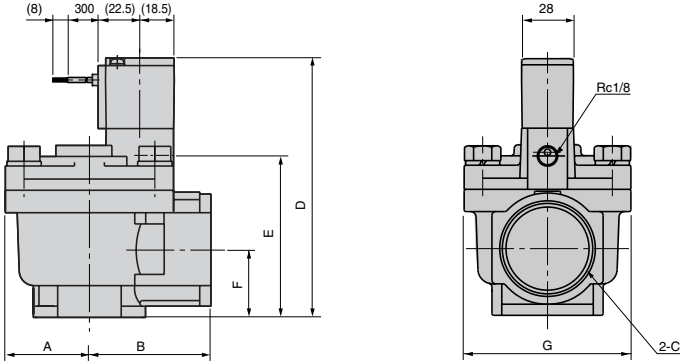
Custom
order

For dust collector control
Fluid control components for air blow

PD3/PDV3 Series

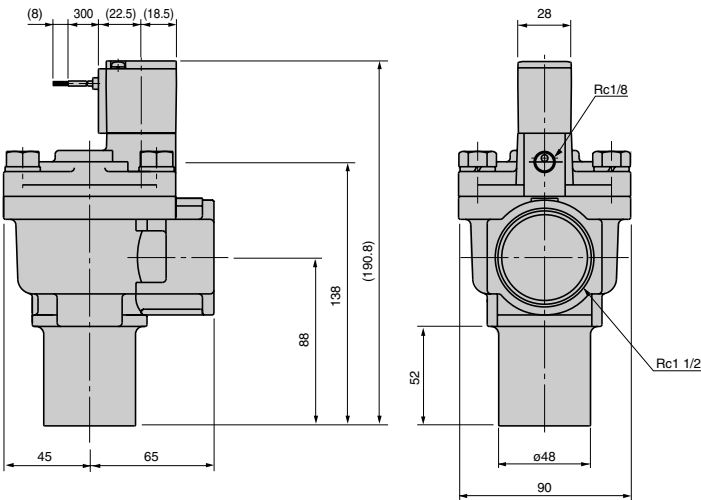
Dimensions: PDV3 Series  (Page 698)

- Solenoid valve mounted type / grommet lead wire
 PDV3-20A/25A-2C
 PDV3-40A-RC



Model no.	A	B	C	D	E	F	G
PDV3-20A	31.5	40	Rc3/4	116.8	64	31	60
PDV3-25A	37.5	45	Rc1	128.8	76	39	71
PDV3-40A-RC	45	65	Rc1 1/2	138.8	86	36	90

- Solenoid valve mounted type / grommet lead wire
 PDV3-40A-2C



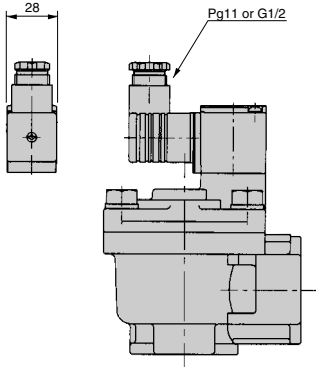
Optional dimensions (Page 698)

- DIN terminal box (with light and surge suppressor)

DIN terminal box with light

PDV3-⁻

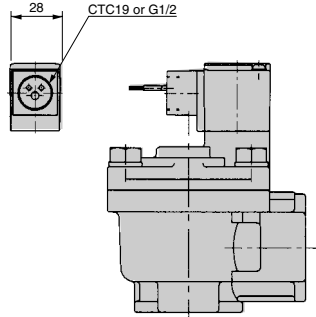
2E/2ES
2G
2H/2HS



- Conduit (CTC19, G1/2)

PDV3-⁻

2CG
2CH

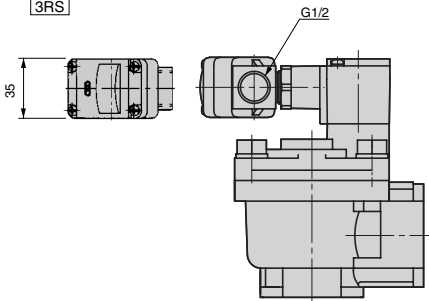


- T type terminal box (G1/2) (with light and surge suppressor)

T type terminal box with light (G1/2)

PDV3-⁻

3T
3R
3RS



HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

AB

AG

AP/
AD

APK/
ADK

For
dry air

Explosion
proof

HVB/
HVL

SAB/
SVB

NP/NAP/
NVP

CHB/G

MXB/G

Other G.P.
systems

PD/FAD/
P.J

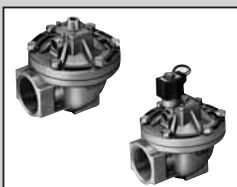
CVE/
CVSE

CPE/
CPD

Medical
analysis

Custom
order

For dust collector control
Fluid control components for air blow



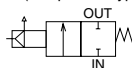
Pilot operated 2 port valve for dust collector control
(pulsejet valve)

PD2/PDV2 Series

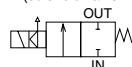
- Air operated type, solenoid valve mounted type
- Port size: Rc2

JIS symbol

- PD2
(air operated type)



- PDV2
(solenoid valve mounted type)



Specifications

Item	Air operated type	Solenoid valve mounted type
	PD2-50A	PDV2-50A
Working fluid	Air (no corrosive gas)	
Min. working pressure dif. MPa	0.1	
Max. working pressure dif. MPa	0.7	
Max. working pressure MPa	0.7	
Withstanding pressure (water) MPa	1.5	
Fluid temperature °C	-10 to 60, -10 to 100 for fluoro rubber seal (no freezing)	
Ambient temperature °C	-10 to 60, -10 to 100 for fluoro rubber seal	
Atmosphere	Place free of corrosive gas and explosive gas	
Valve structure	Pilot operated poppet structure	
Port size	Rc2	
Orifice mm	53	
Cv flow factor	62	
Pilot port size	Rc1/4	-
Weight kg	1.9	2.1
Mounting attitude	Free	
Electric specifications	PDV2	
Rated voltage	100 VAC (50/60 Hz), 110 VAC (60 Hz); 200 VAC (50/60 Hz), 220 VAC (60 Hz); 12 VDC; 24 VDC, 48 VDC, 100 VDC	
Voltage fluctuation range	-10 to +10% of rated voltage	
Apparent power VA	12 (50 Hz), 10 (60 Hz)	
Power consumption W	11 (DC)	
Heat proof class	B (H when using coil option 4A) JIS C-4003	

*1: For a solenoid valve for driving the air operated type PD2-50A, use FAB31-8-3 (page 26), AB31-02-3 (page 130), AB41E4-02-3-03T (explosion proof, page 360) or PJVB (page 690).

*2: Consult with CKD when using the valve at a garbage incineration plant for smoke treatment, or in a dust collector for combustible gas, etc.

*3: High corrosion resistant types, etc. are also available. Consult with CKD. (Custom order)

*4: The combination of PD2 and PJVB is recommended for outdoors.

How to order

- Air operated type

PD2 - **50A** - ○ - **S**

- Solenoid valve mounted type

PDV2 - **50A** - ○ - **2E** - **S** - **AC100V**

Model no.

Port size
Rc2

A Sealant
*2

B Coil option
*3

C Other options
*2

D Voltage
*3
*4

<Example of model number>

PDV2-50A-2E-S-AC100V

Model no.: PDV2 (port size Rc2)

- A** Sealant : Nitrile rubber
- B** Coil option : DIN terminal box (G1/2)
- C** Other options : Silencer
- D** Voltage : 100 VAC (50/60 Hz), 110 VAC (60 Hz)

Model no.

P
D
2

P
D
V
2

Symbol	Descriptions		
A Sealant			
Blank	Nitrile rubber	●	●
F	Fluoro rubber	●	●
B Coil option			
Blank	Std. Grommet lead wire		●
2E	DIN terminal box (G1/2)		●
2G	DIN terminal box (Pg11)		●
2H	DIN terminal box + small light (Pg11)		●
3A	Option Open frame lead wire		●
3M	Open frame HP terminal box (G1/2)		●
3N	Open frame HP terminal box + light (G1/2)		●
4A	Open frame lead wire (heat proof class H)		●
C Other options			
Blank	No options	●	●
S	Silencer (SLW-10A) (enclosed with the product)	●	●
D Voltage			
AC100V	100 VAC (50/60 Hz), 110 VAC (60 Hz)		●
AC200V	200 VAC (50/60 Hz), 220 VAC (60 Hz)		●
DC12V	12 VDC		●
DC24V	24 VDC		●
DC48V	48 VDC		●
DC100V	100 VDC		●

*1: The combinations indicated with ● in the above table are available.

*2: When **A** is F (sealant: fluoro rubber), only **A4** is available for **B** (coil option), and only blank (no options) is available for **C** (other options).

*3: When **B** (coil option) is blank or **4A**, only AC voltage is available.

*4: For voltages other than above, consult with CKD.

HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

AB

AG

AP/

AD

APK/

ADK

For

dry air

Explosion

proof

HVB/

HVL

SAB/

SVB

NP/NAP/

NVP

CHB/G

MXB/G

Other G.P.

systems

PD/FAD/

PJ

CVB/

CVSE

CPE/

CPD

Medical

analysis

Custom

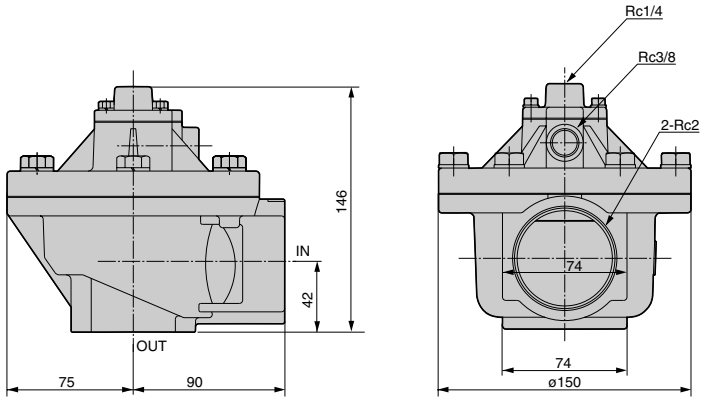
order

For dust collector control

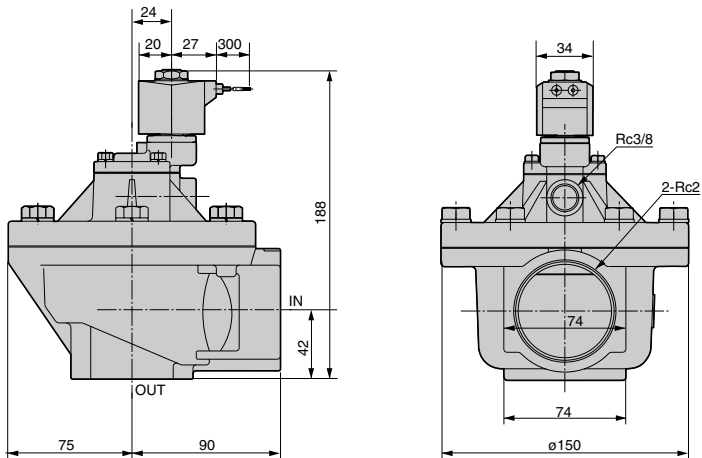
Fluid control components for air blow

Dimensions

- Air operated type
PD2-50A



- Solenoid valve mounted type / grommet lead wire
PDV2-50A



HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

AB

AG

AP/
AD

APK/
ADK

For
dry air

Explosion
proof

HVB/
HVL

SAB/
SVB

NP/NAP/
NVP

CHB/G

MXB/G

Other G.P.
systems

PD/FAD/
P.J

CVB/
CVSE

CPE/
CPD

Medical
analysis

Custom
order

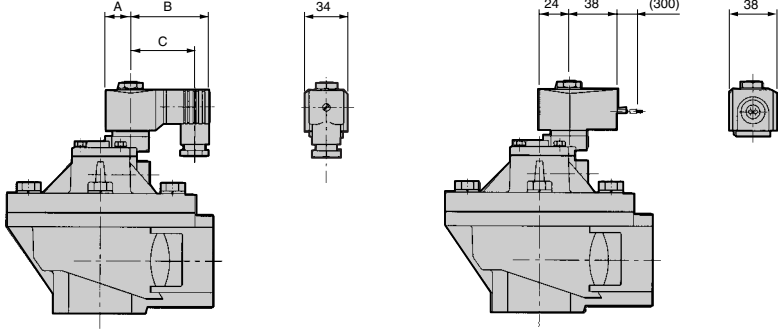
For dust collector control
Fluid control components for air blow

PD2/PDV2 Series

Optional dimensions

- DIN terminal box
DIN terminal box with small light
PDV2-50A-2E
2G
2H

- Open frame lead wire
PDV2-50A-3A
4A

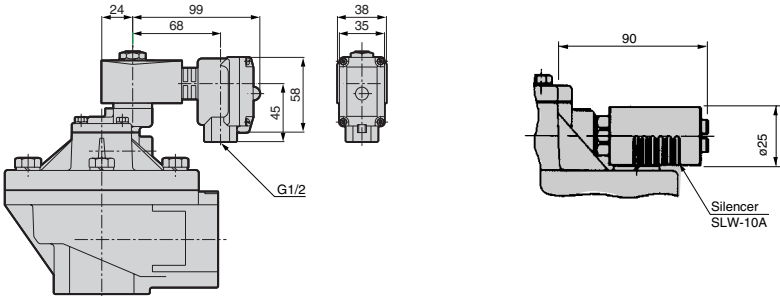


Voltage	A	B	C
AC	20	62	50.5 (50)
DC	21	63.5	52 (51.5)

* Shown in () are for 2E.

- Open frame square terminal box
Open frame square terminal box with light
PDV2-50A-3M
3N

- Silencer (screw)
PD2/PDV2-S



Fluid control components for air blow

Electronic Catalog file list

Fluid control components for air blow

High performance direct acting 2 port solenoid valve (page 669)

Electronic Catalog file list is applied to "CAD DATA 2006".

Model no.	DXF		MICRO CADAM
	Folder name	Filename	Filename (GROUP: CAD, USER: STDLIB)
PJ-C6	PJ_GPJ	pj_c6	CKD-PJ-C6
GPJ-0		gpj_0	CKD-GPJ-0

Pilot operated 2 port solenoid valve (pages 673 to 674)

Model no.	DXF		MICRO CADAM
	Folder name	Filename	Filename (GROUP: CAD, USER: STDLIB)
FAD-8A/10A-2C	FAD	fad_8a_10a_2c	CKD-FAD-8A/10A-2C
FAD-8A/10A-2CS		fad_8a_10a_2cs	CKD-FAD-8A/10A-2CS
FAD-8A/10A-2G		fad_8a_10a_2g	CKD-FAD-8A/10A-2G
FAD-L10/15A-2C		fad_l10_15a_2c	CKD-FAD-L10/15A-2C
FAD-L10/15A-2G		fad_l10_15a_2g	CKD-FAD-L10/15A-2G
FAD-L10/15A-2CS		fad_l10_15a_2cs	CKD-FAD-L10/15A-2CS
FAD-L10/15A-2CG		fad_l10_15a_2cg	CKD-FAD-L10/15A-2CG
FAD-L10/15A-3T		fad_l10_15a_3t	CKD-FAD-L10/15A-3T
Accessory (mounting plate)		fad_f	CKD-FAD-F

Direct acting 2 port solenoid valve (page 677)

Model no.	DXF		MICRO CADAM
	Folder name	Filename	Filename (GROUP: CAD, USER: STDLIB)
FAPB-8-5	FAPB	fapb_8_5	CKD-FAPB-8-5

Pilot operated 2 port valve for dust collector control (pages 681 to 683)

Model no.	DXF		MICRO CADAM
	Folder name	Filename	Filename (GROUP: CAD, USER: STDLIB)
PD3-20A	PD3_PDV3	pd3_20a	CKD-PD3-20A
PD3-25A		pd3_25a	CKD-PD3-25A
PD3-40A		pd3_40a	CKD-PD3-40A
PD3-40A-RC		pd3_40a_rc	CKD-PD3-40A-RC
PDV3-20A		pdv3_20a	CKD-PDV3-20A
PDV3-25A		pdv3_25a	CKD-PDV3-25A
PDV3-40A		pdv3_40a	CKD-PDV3-40A
PDV3-40A-RC		pdv3_40a_rc	CKD-PDV3-40A-RC
Accessory DIN terminal box (G1/2, Pg11), with light, conduit (CTC19, G1/2), T type terminal box (G1/2), with light		pdv3_f	CKD-PDV3-F

Box type manifold solenoid valve for control (page 691)

Model no.	DXF		MICRO CADAM
	Folder name	Filename	Filename (GROUP: CAD, USER: STDLIB)
PJVB-6	PJVB	pjvb_6	CKD-PJVB-6
PJVB-8		pjvb_8	CKD-PJVB-8