

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
 Fluid control components for air blow

Dust collector control (PD/PDV/PJVB)

Design & Selection

⚠ WARNING

1 Working environment

- (1) If the gas treated by the dust collector contains a corrosive gas, make sure that the corrosive gas is not led toward the valve.
In addition, pipe the valve so that dew does not condense at the OUT port section.
- (2) When using outdoors or where it could come in contact with water, use the PDVE4 Series or PD2 or PD3 Series.
PDV2 and PDV3 cannot be used at such places. Provide a cover or install a panel.
- (3) Do not use urethane rubber for the waste incineration dust collector.

2 Take appropriate measures to prevent adverse effects to humans or assets should this product fail.

3 Refer to the Specifications for the scope of each PD Series product guarantee and for details on compensation.

⚠ CAUTION

1 Minimum working pressure

The minimum working differential pressure required for the PD2, PDV2, PD3, PDV3 and PDVE4 types is 0.1 MPa. If the piping cross-section area on the fluid inlet is reduced, the operation may become unstable due to a differential pressure fault during valve operation. The piping on the fluid inlet must have a size that matches the valve port size, and must have no restricted sections.

2 Air supply rate

Maintain the air supply rate two to three times the rate used by the dust collector in the header tank.

3 Supplied air

Do not lubricate the air supplied to the valve with a lubricator.

Installation, Piping & Wiring

⚠ CAUTION

1 Wiring

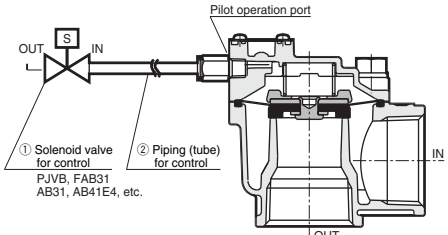
- (1) The solenoid valve does not have polarity.
- (2) When using an explosion proof solenoid valve, follow the Recommended Practices for Explosion-protected Electrical Installations in General Industries when wiring.

2 Piping the valve for control

Connect the IN port of the solenoid valve for control (-5 to 60 for 10A to 25A and -5 to 40 for 32A to 50A of NP13/NP14 below) to the pilot operation port of the pilot air operated valve (PD2 or PD3), and leave the OUT port of the solenoid valve for control released into atmosphere. (Install a silencer if needed.) Do not supply air from an external source to the pilot operation port.

The response of the pilot air operated valve (PD2 or PD3) changes based on the effective sectional area of the solenoid valve for control and the inner diameter and length of tubing (High corrosion resistant/with relay below) connecting the pilot operation port.

The effective sectional area of the solenoid valve for control should be 5.8 to 15 mm² (equivalent to an orifice diameter of ø3 to 5). Tubing should have an inner diameter of 4 mm or 6 mm and be 1 m long or less.



When Using

⚠ CAUTION

- 1 If the pilot air discharge noise could cause noise disturbances, install a silencer on the exhaust port.
- 2 Set the energizing time according to the dust collector dust collection efficiency.

Maintenance

⚠ CAUTION

- 1 Periodically drain the drainage if accumulated in the air filter.



Box type manifold solenoid valve for control
(2 port solenoid valve for dust collector control)

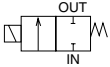
PJBV Series

- For air operated PD3 Series
- NC (normally closed) type
- Port size: Rc1/8, Rc1/4



JIS symbol

- NC (normally closed) type



Specifications

| Item | PJBV-6/8-3 | PJBV-8-5 |
|-----------------------------------|--|--|
| Working fluid | Air (no corrosive gas) | |
| Working pressure range MPa | 0 to 0.7 | |
| Withstanding pressure (water) MPa | 1.1 | |
| Fluid temperature °C | -10 to 60 (no freezing) | |
| Ambient temperature °C | -10 to 60 | |
| Atmosphere | Place free of corrosive gas and explosive gas | |
| Valve structure | Direct acting poppet structure (normally closed) | |
| Port size | Rc1/8, Rc1/4 | Rc1/4 |
| Orifice mm | 3 | 5 |
| Rating | Intermittent rating (ON: 1 sec or less, OFF: 1 sec or more) | Intermittent rating (ON: 1 sec or less, OFF: 10 sec or more) |
| Box specifications | | |
| Case material | Aluminum | |
| Hole for conduit | G1 | |
| Mounting attitude | Place sub-plate downward. | |
| Protective structure | Equivalent to IP64 | |
| Size (reference) mm | 140 x 510 x 105 (depth x width x height/solenoid valve 2 to 12 stations) | |
| Electric specifications | | |
| Rated voltage | 100 VAC (50/60 Hz), 110 VAC (60 Hz); 200 VAC (50/60 Hz), 110 VAC (60 Hz) | |
| 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 | | 4.0 (50 Hz), 3.4 (60 Hz) |
| | | 9.8 (50 Hz), 6.6 (60 Hz) |
| Heat proof class | B | |

How to order

PJBV - **6** - **3** - **10** - **AC100V**

Model no.

A Port size

*1

B Orifice

*1

C Station no.

D Voltage

*2

| Symbol | Descriptions |
|----------------------|-------------------------------------|
| A Port size | |
| 6 | Rc1/8 |
| 8 | Rc1/4 |
| B Orifice | |
| 3 | ø3 |
| 5 | ø5 |
| C Station no. | |
| 2 | 2 stations |
| 3 | 3 stations |
| 4 | 4 stations |
| 5 | 5 stations |
| 6 | 6 stations |
| 7 | 7 stations |
| 8 | 8 stations |
| 9 | 9 stations |
| 10 | 10 stations |
| 11 | 11 stations |
| 12 | 12 stations |
| D Voltage | |
| AC100V | 100 VAC (50/60 Hz), 110 VAC (60 Hz) |
| AC200V | 200 VAC (50/60 Hz), 220 VAC (60 Hz) |

<Example of model number>

PJBV-6-3-10-AC100V

Model no.: PJBV

A Port size : Rc1/8

B Orifice : ø3

C Station no.: 10 stations

D Voltage : 100 VAC (50/60 Hz), 110 VAC (60 Hz)

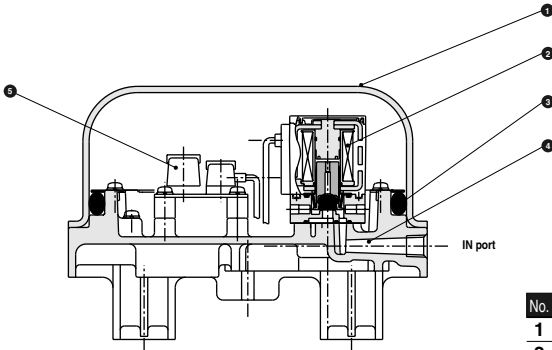
*1: When orifice size is ø5, port size R1/8 (**A** 6) is not available.

*2: For voltages other than above, consult with CKD. DC voltage is used only for orifice size ø3, and is custom ordered.

*3: Types with surge suppressor is custom ordered.

Internal structure and parts list

- PJVB-6/8-3-2 to 12
PJVB-8-5-2 to 12



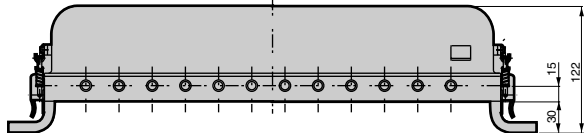
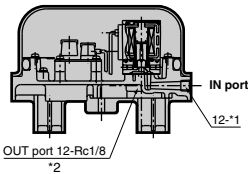
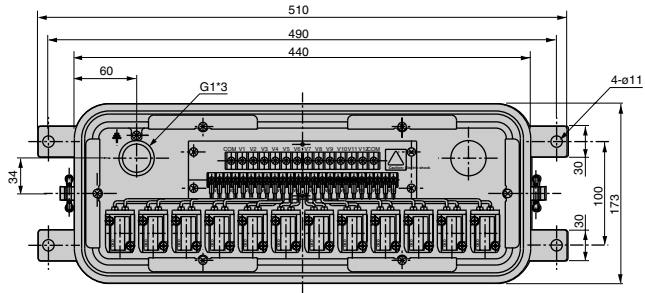
| No. | Parts name | Material |
|-----|--------------------|---------------------------------|
| 1 | Cover | A1100P Aluminum |
| 2 | Solenoid valve | GFAB31-X0930, GFAB31-X0931 (*1) |
| 3 | O ring | NBR Nitrile rubber |
| 4 | Sub-plate | ADC12 Aluminum die casting |
| 5 | Terminal block set | |

*1: GFAB31-X0930 is used for PJVB-6/8-3 and GFAB31-X0931 for PJVB-8-5.

Dimensions

(Page 698)

- Box: Solenoid valve 2 to 12 stations
PJVB-6/8-3-2 to 12
PJVB-8-5-2 to 12



*1: IN port size

| Model no. | |
|----------------------------------|-------|
| PJVB-6-3-[Station no.]-[Voltage] | Rc1/8 |
| PJVB-8-3-[Station no.]-[Voltage] | Rc1/4 |
| PJVB-8-5-[Station no.]-[Voltage] | Rc1/4 |

*2: A silencer (SLW-6A) can be installed on the OUT port.

*3: "2-G1" specification is also available. (Custom order)

HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB

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

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 |