



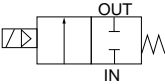
Pilot operated 2 port solenoid valve

# PVS Series

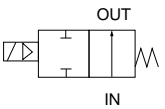
- NC (normally closed) type, NO (normally open) type
- Working fluid: steam, water, air
- Port size: Rc1/2, Rc3/4, Rc1, 32 to 80 flange

## JIS symbol

- NC (normally closed) type



- NO (normally open) type



## Stable operation and long service life general purpose valve

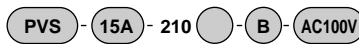
- The use of 3 port pilot valve enables stable operation
- Short plunger stroke length
- Packless pipe double structure
- NC (normally closed) / NO (normally open) types (explosion proof type also available)

## Specifications

Item	PVS-15A-210	PVS-20A-210	PVS-25A-210	PVS-32A-210	PVS-40A-210	PVS-50A-210	PVS-65A-210	PVS-80A-210
Working fluid	Steam, water, air							
Port size	Rc1/2	Rc3/4	Rc1	32 flange	40 flange	50 flange	65 flange	80 flange
Orifice mm	15	20	25	32	40	50	65	80
Cv flow factor	3.1	5.4	10	22	30	48	68	100
Working pressure range MPa	0.05 to 1							
Withstanding pressure (water pressure) MPa	1.5							
Fluid temperature °C	5 to 185							
Ambient temperature °C	0 to 70							
Valve seat leakage cm <sup>3</sup> /min.	400 or less (at pneumatic pressure 0.05 to 1 MPa)					800 or less (at pneumatic pressure 0.05 to 1 MPa)		
Mounting attitude	Limited to vertical position with coil facing upward.							
Weight kg	2.2	2.6	3.1	8.5	9.8	14.2	21.8	25.1
<b>Electric specifications</b>								
Rated voltage	100 VAC 50/60 Hz, 200 VAC 50/60 Hz							
Apparent power VA	Holding		37 (43)				85 (102)	
	Starting		130 (151)				300 (360)	
Heat proof class	H							

Note 1: Values shown in ( ) are for the NO type.

## How to order



A Port size

B Actuation

C Coil option

D Voltage

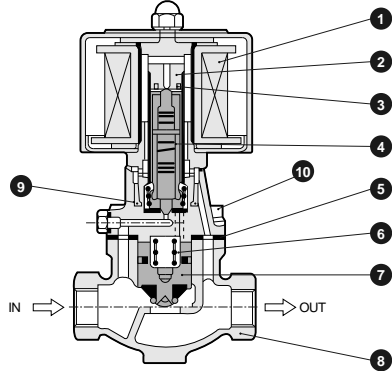
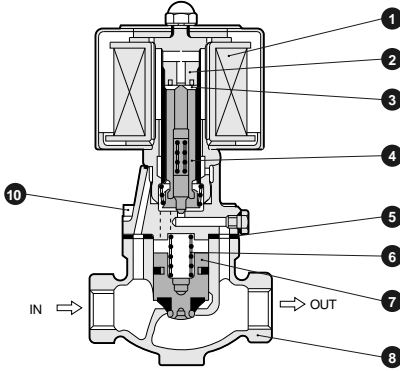
Symbol	Descriptions
<b>A Port size</b>	
15A	Rc1/2
20A	Rc3/4
25A	Rc1
32A	32 flange
40A	40 flange
50A	50 flange
65A	65 flange
80A	80 flange
<b>B Actuation</b>	
Blank	NC (normally closed) type
NO	NO (normally open) type
<b>C Coil option</b>	
Blank	Open frame lead wire coil
4M	HP terminal box (G1/2)
4N	HP terminal box + light (G1/2)
<b>D Voltage</b>	
AC100V	100 VAC 50/60 Hz
AC200V	200 VAC 50/60 Hz

\* Terminal boxes and glands etc. are available. Contact CKD for details.

## Internal structure and parts list

● NC (normally closed) type  
PVS-15A to 80A-210

● NO (normally open) type  
PVS-15A to 80A-210NO



When de-energized, the NO (normally open) type opens the main valve by the pressure of working fluid from the IN port.

No.	Parts name	Material	No.	Parts name	Material
1	Coil	—	6	Spring Note 1	SUS304 Stainless steel
2	Core assembly	SUS405 or equivalent	7	Main valve	SUS304, PTFE Stainless steel Tetrafluoroethylene resin
3	Shading coil	C1100T Copper	8	Body	CAC408 Bronze casting
4	Plunger	SUS405 or equivalent	9	O ring	FKM Fluoro rubber
5	Gasket	PTFE	10	Bolt	SWRM Steel

Note 1: A spring is not available for 50A to 80A.

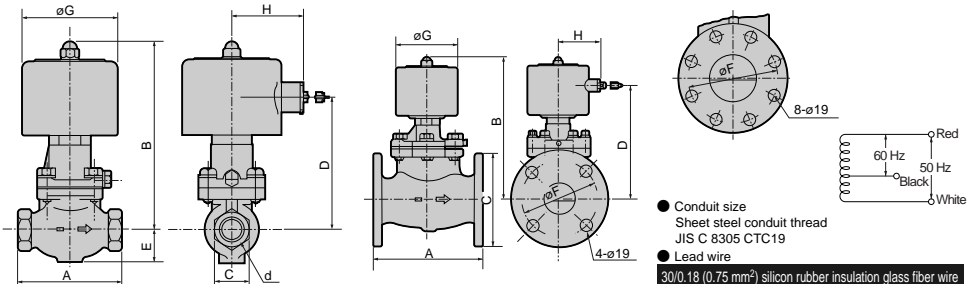
Note 2: Retighten the bolt after using for approx. one day.

## Dimensions

● PVS-15A to 25A-210

● PVS-32A to 80A-210

● PVS-80A-210



\* d shows port size (refer to the left page).

Model no.	A	B	C	D	E	F	G	H
PVS-15A-210	90	152	29	107	27	N	84	61
PVS-20A-210	100	159	35	114	31	N	84	61
PVS-25A-210	110	170	46	125	33	N	84	61
PVS-32A-210	170	181	135	136	N	100	84	61
PVS-40A-210	180	191	140	146	N	105	84	61
PVS-50A-210	180	238	155	177	N	120	100	69
PVS-65A-210	210	263	175	203	N	140	100	69
PVS-80A-210	240	290	185	230	N	150	100	69

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

CVE/CVSE

CPE/CPD

Medical analysis

Custom order

Pilot operated 2 port solenoid valve



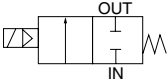
Pilot kick type 2 port solenoid valve for air

# PKA Series

- NC (normally closed) type
- Working fluid: air
- Port size: Rc1/2, Rc3/4, Rc1, 32 to 50 flange

JIS symbol

- NC (normally closed) type



Operation from zero pressure differential.

Low vacuum operation also available.

- Stable operation under both low and high pressures
- Operation from zero pressure differential

## Specifications

Item	PKA-04-27	PKA-06-27	PKA-10-27	PKA-12-27	PKA-14-27	PKA-20-25
Working fluid	Air					
Port size	Rc1/2	Rc3/4	Rc1	32 flange	40 flange	50 flange
Orifice mm	15	20	25	35	40	50
C [dm <sup>3</sup> /(s·bar)]	20	—	—	—	—	—
b	0.30	—	—	—	—	—
s (mm <sup>2</sup> )	—	128	220	404	552	883
Working pressure range MPa	0 to 0.7					0 to 0.5
Withstanding pressure (weater pressure) MPa	1.5					1.0
Fluid temperature °C	5 to 60					
Ambient temperature °C	0 to 65			0 to 45		0 to 40
Valve seat leakage cm <sup>3</sup> /min.	1 or less, 400 or less for stainless steel (Note 1)			2 or less, 400 or less for stainless steel (Note 1)		
Mounting attitude	Limited to vertical position with coil facing upward.					
Weight kg	1.8	2.2	2.9	9	10	13
<b>Electric specifications</b>						
Rated voltage	100 VAC 50/60 Hz, 200 VAC 50/60 Hz					
Apparent power VA	Holding	30			75	90
	Starting	80			150	180
Power consumption W	22			57	68	
Heat proof class	B					

Note 1: For PKA-04 to 14, the value at pneumatic pressure 0.05 to 0.7 MPa is shown. For PKA-20, the value at pneumatic pressure 0.05 to 0.5 MPa is shown. When used at a pressure less than 0.05 MPa, the sealant may be unstable. Consult with CKD in this case.

Note 2: Effective sectional area S and sonic conductance C are converted as  $S = 5.0 \times C$ .

## How to order

PKA - 04 - 27 - C - B - AC100V

Fixed symbol  
(25 for PKA-20)

A Port size

B Body material

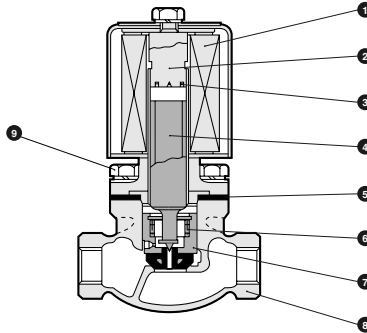
C Coil option

D Voltage

Symbol	Descriptions
<b>A Port size</b>	
04	Rc1/2
06	Rc3/4
10	Rc1
12	32 flange
14	40 flange
20	50 flange
<b>B Body material</b>	
Blank	Bronze
C	Stainless steel
<b>C Coil option</b>	
Blank	Open frame lead wire coil
3M	HP terminal box (G1/2)
3N	HP terminal box + light (G1/2)
<b>D Voltage</b>	
AC100V	100 VAC 50/60 Hz
AC200V	200 VAC 50/60 Hz

\* Terminal boxes and glands etc. are available. Contact CKD for details.

## Internal structure and parts list



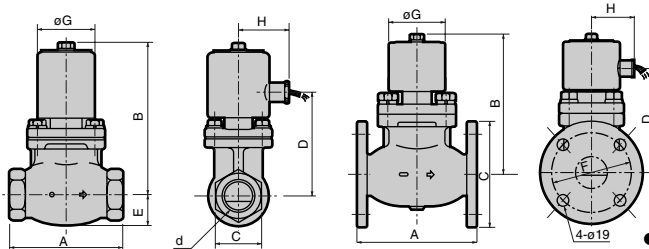
No.	Parts name	Material	No.	Parts name	Material
1	Coil	—	6	Spring	SUS304 Stainless steel
2	Core assembly	SUS405 or equivalent, SUS316L	7	Main valve	C3604, NBR (SUS304, PTFE) Brass, nitrile rubber (stainless steel, tetrafluoroethylene resin)
3	Shading coil	Cu (Ag)	8	Body	CAC408 (SCS13) Bronze casting (stainless steel casting)
4	Plunger	SUS405 or equivalent	9	Bolt	SWRM (SUS304)
5	Gasket	Inorganic fiber (PTFE) — (Tetrafluoroethylene resin)			

Materials shown in ( ) are for stainless steel body.

## Dimensions

● PKA-04 to 10-27

● PKA-12 to 20-27 (25)



● Conduit size  
Sheet steel conduit thread  
JIS C 8305 CTC19

● Lead wire

30/0.18 (0.75 mm<sup>2</sup>) heat proof vinyl twist wire

Length 300 mm

\* d shows port size (refer to the left page).

Model no.	A	B	C	D	E	F	G	H
PKA-04-27	90	126	29	88	23	N	60	49
PKA-06-27	100	133	35	95	26	N	60	49
PKA-10-27	110	145	46	107	30	N	60	49
PKA-12-27	170	180	135	128	N	100	84	66
PKA-14-27	180	185	140	133	N	105	84	66
PKA-20-25	180	205	155	155	N	120	84	66

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  
CVE/  
CVSE  
CPE/  
CPD  
Medical  
analysis  
Custom  
order

For air  
Pilot kick type 2 port solenoid valve



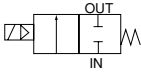
Pilot kick type 2 port solenoid valve for water

# PKW Series

- NC (normally closed) type
- Working fluid: water
- Port size: Rc1/2, Rc3/4, Rc1, 32 to 50 flange

## JIS symbol

- NC (normally closed) type



Operation from zero pressure differential.

Stainless steel body also available.

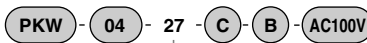
- Stable operation under both low and high pressures
- Usable at high humidity (up to 95%)
- Operation from zero pressure differential

## Specifications

Item	PKW-04-27	PKW-06-27	PKW-10-27	PKW-12-27	PKW-14-27	PKW-20-25
Working fluid	Water					
Port size	Rc1/2	Rc3/4	Rc1	32 flange	40 flange	50 flange
Orifice mm	15	20	25	35	40	50
Cv flow factor	4	7	12	22	30	48
Working pressure range MPa	0 to 0.7					0 to 0.5
Withstanding pressure (water pressure) MPa	1.5					1.0
Fluid temperature °C	5 to 60					
Ambient temperature °C	0 to 65			0 to 45		0 to 40
Valve seat leakage cm <sup>3</sup> /min.	0 (at water pressure 0.05 to 0.7 (0.5) MPa), 5 or less for stainless steel					
Mounting attitude	Limited to vertical position with coil facing upward.					
Weight kg	1.8	2.2	2.9	9	10	13
<b>Electric specifications</b>						
Rated voltage	100 VAC 50/60 Hz, 200 VAC 50/60 Hz					
Apparent power VA	Holding	30			75	90
	Starting	80			150	180
Power consumption W	22			57	68	
Heat proof class	B					

Note: When used at a pressure less than 0.05 MPa, the sealant may be unstable. Consult with CKD in this case.

## How to order



Fixed symbol  
(25 for PKW-20)

A Port size

B Body material

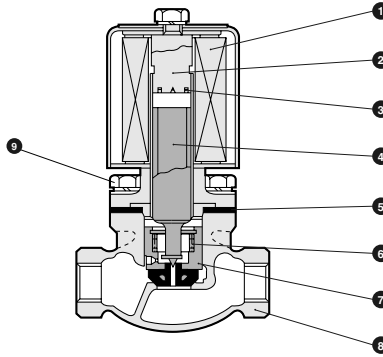
C Coil option

D Voltage

Symbol	Descriptions
<b>A Port size</b>	
04	Rc1/2
06	Rc3/4
10	Rc1
12	32 flange
14	40 flange
20	50 flange
<b>B Body material</b>	
Blank	Bronze
C	Stainless steel
<b>C Coil option</b>	
Blank	Open frame lead wire coil
3M	HP terminal box (G1/2)
3N	HP terminal box + light (G1/2)
<b>D Voltage</b>	
AC100V	100 VAC 50/60 Hz
AC200V	200 VAC 50/60 Hz

\* Terminal boxes and glands etc. are available. Contact CKD for details.

## Internal structure and parts list



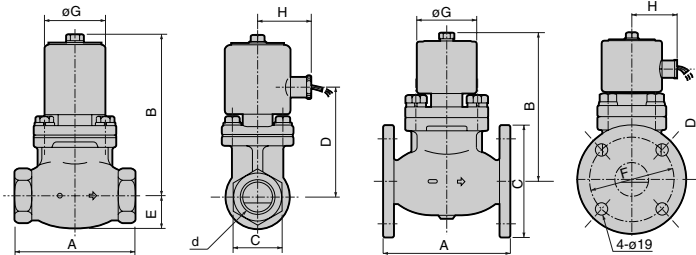
No.	Parts name	Material	No.	Parts name	Material
1	Coil		6	Spring	SUS304
2	Core assembly	SUS405 or equivalent, SUS316L	7	Main valve	C3604, NBR (SUS304, PTFE)
3	Shading coil	Cu (Ag)	8	Body	CAC408 (SCS13)
4	Plunger	SUS405 or equivalent	9	Bolt	SWRM (SUS304)
5	Gasket	Inorganic fiber (PTFE), (Tetrafluoroethylene resin)			

Materials shown in ( ) are for stainless steel body.

## Dimensions

● PKW-04 to 10-27

● PKW-12 to 20-27 (25)



- Conduit size  
Sheet steel conduit thread  
JIS C 8305 CTC19
- Lead wire

30/0.18 (0.75 mm<sup>2</sup>) heat proof vinyl twist wire

Length 300 mm

\* d shows port size (refer to the left page).

Model no.	A	B	C	D	E	F	G	H
PKW-04-27	90	126	29	88	23	N	60	49
PKW-06-27	100	133	35	95	26	N	60	49
PKW-10-27	110	145	46	107	30	N	60	49
PKW-12-27	170	180	135	128	N	100	84	66
PKW-14-27	180	185	140	133	N	105	84	66
PKW-20-25	180	205	155	155	N	120	84	66

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  
CVE/  
CVSE  
CPE/  
CPD  
Medical  
analysis  
Custom  
order

For water  
Pilot kick type 2 port solenoid valve



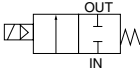
Pilot kick type 2 port solenoid valve for steam

# PKS Series

- NC (normally closed) type
- Working fluid: steam
- Port size: Rc1/2, Rc3/4, Rc1, 32 to 50 flange

## JIS symbol

- NC (normally closed) type



## Operation from zero pressure differential

- Stable operation under both low and high pressures
- Operation from zero pressure differential

## Specifications

Item	PKS-04-27	PKS-06-27	PKS-10-27	PKS-12-27	PKS-14-27	PKS-20-25
Working fluid	Steam					
Port size	Rc1/2	Rc3/4	Rc1	32 flange	40 flange	50 flange
Orifice mm	15	20	25	35	40	50
Cv flow factor	4	7	12	22	30	48
Working pressure range MPa	0 to 0.7					0 to 0.5
Withstanding pressure (water pressure) MPa	1.5					1.0
Fluid temperature °C	5 to 175					5 to 160
Ambient temperature °C	0 to 70					
Valve seat leakage cm <sup>3</sup> /min.	400 or less (at pneumatic pressure 0.05 to 0.7 (0.5) MPa)					
Mounting attitude	Limited to vertical position with coil facing upward.					
Weight kg	1.8	2.2	2.9	9	10	13
<b>Electric specifications</b>						
Rated voltage	100 VAC 50/60 Hz, 200 VAC 50/60 Hz					
Apparent power VA	Holding	30		75		90
	Starting	80		150		180
Power consumption W	22		60		61	
Heat proof class	H					

Note: When used at a pressure less than 0.05 MPa, the sealant may be unstable. Consult with CKD in this case.

## How to order

PKS - 04 - 27 - B - AC100V

Fixed symbol  
(25 for PKS-20)

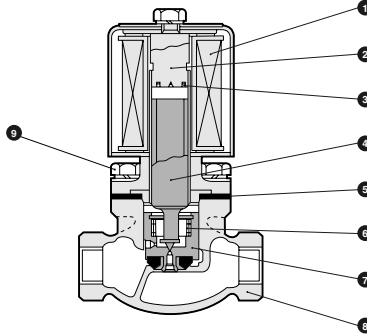
A Port size

B Coil option

C Voltage

Symbol	Descriptions
<b>A Port size</b>	
04	Rc1/2
06	Rc3/4
10	Rc1
12	32 flange
14	40 flange
20	50 flange
<b>B Coil option</b>	
Blank	Open frame lead wire coil
4M	HP terminal box (G1/2)
4N	HP terminal box + light (G1/2)
<b>C Voltage</b>	
AC100V	100 VAC 50/60 Hz
AC200V	200 VAC 50/60 Hz

## Internal structure and parts list



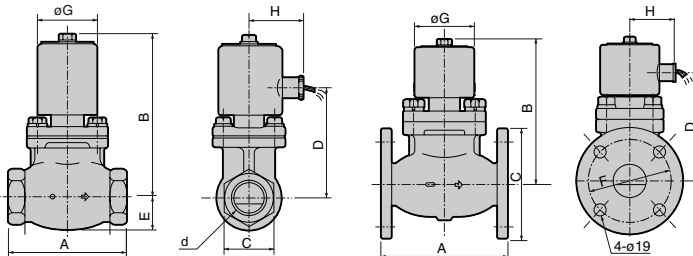
No.	Parts name	Material	No.	Parts name	Material
1	Coil	—	6	Spring	SUS304
2	Core assembly	SUS405 or equivalent, SUS316L	7	Main valve	SUS304, PTFE
3	Shading coil	Cu	8	Body	CAC408
4	Plunger	SUS405 or equivalent	9	Bolt	SWRM
5	Gasket	PTFE			Stainless steel
					Tetrafluoroethylene resin
					Stainless steel
					Tetrafluoroethylene resin
					Steel

Note 1: Retighten the bolt after using for approx. one day.

## Dimensions

● PKS-04 to 10-27

● PKS-12 to 20-27 (25)



- Conduit size  
Sheet steel conduit thread  
JIS C 8305 CTC19
- Lead wire

30/0.18 (0.75 mm<sup>2</sup>) silicone isolation glass fiber wire

Length	300 mm
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\* d shows port size (refer to the left page).

Model no.	A	B	C	D	E	F	G	H
PKS-04-27	90	126	29	88	23	N	60	49
PKS-06-27	100	133	35	95	26	N	60	49
PKS-10-27	110	145	46	107	30	N	60	49
PKS-12-27	170	180	135	128	N	100	84	66
PKS-14-27	180	185	140	133	N	105	84	66
PKS-20-25	180	205	155	155	N	120	84	66

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  
CVE/  
CVSE  
CPE/  
CPD  
Medical  
analysis  
Custom  
order

For steam Pilot kick type 2 port solenoid valve