

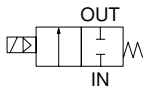
Pilot kick 2-port solenoid valve for steam

SPK Series

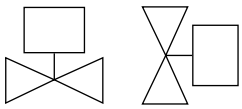
- NC (open when energized)
- Working fluid: Steam
- Port size: Rc1/2 to Rc1

RoHS CAD

JIS symbol



Mounting orientation



Common specifications

Item	SPK11
Working fluid	Steam
Working pressure differential MPa	0 (≈0 psi, 0 bar) to 1.0 (≈150 psi, 10 bar)
Max. working pressure MPa	1 (≈150 psi, 10 bar)
Proof pressure (water pressure) MPa	2 (≈290 psi, 20 bar)
Fluid temperature °C	5 (41°F) to 180 (356°F)
Ambient temperature °C	-10 (14°F) to 60 (140°F)
Thermal class	Class 180 (H)
Atmosphere	Place free of corrosive gas and explosive gas
Valve structure	Pilot kick poppet, piston drive
Valve seat leakage (*2) cm^3/min(ANR)	400 or less (air)
Mounting orientation	Limited to the range of vertical orientation with the coil on top to horizontal orientation (*3).

*1 : No freezing.
*2 : Value at pneumatic pressure of 0.05 to 1.0 MPa. When used at a pressure less than 0.05 MPa, the sealant may be unstable. Contact CKD in this case.
*3 : Limited to vertical orientation when used at a pressure less than 0.05 MPa.

Individual specifications

Item / Model No.	Port size	Orifice size (mm)	Rated voltage	Apparent power (VA) When holding 50 Hz	Apparent power (VA) When holding 60 Hz	Apparent power (VA) When starting 50 Hz	Apparent power (VA) When starting 60 Hz	Power consump (W) AC 50/60 Hz	Weight (kg)
SPK11-15A	Rc1/2	16	100 VAC 110 VAC 200 VAC 220 VAC	12	10	42	36	5.6/4.7	1.0
SPK11-20A	Rc3/4	23							1.3
SPK11-25A	Rc1	28							1.7

*1 : The model numbers above show the basic port size (Rc). Refer to How to order for other combinations.
*2 : The voltage fluctuation range must be within ±10% of the rated voltage. If the pressure difference is more than 0.7 MPa, it should be within -5% to +10%.

How to order

SPK11 - 15 A - C 4A G S - AC100V

- SPK11 — Model No.
- 15 — Ⓐ Port size
- A — Ⓑ Thread *3
- C — Ⓒ Body material
- 4A — Ⓓ Coil housing
- G — Ⓔ Coil option
- S — Ⓕ Surge suppressor
- AC100V — Ⓖ Rated voltage

Precautions for model No. selection

*1 : "G" and "H" are available only when the coil housing (D) is "4A".
*2 : "S" is available only when the coil housing (D) is "4A".
*3 : When ordering a stainless steel body with G bolts or NPT bolts, contact CKD.

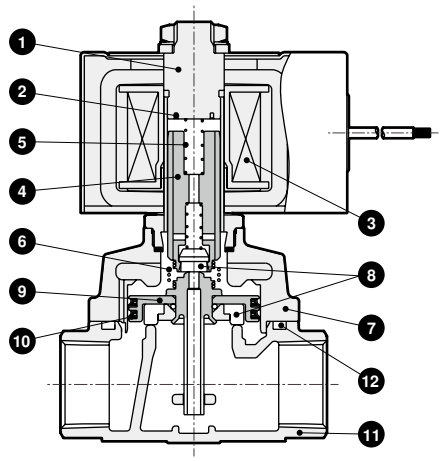
[Example of model No.]

SPK11-15A-C4AGS-AC100V

- Ⓐ Port size : 1/2
- Ⓑ Thread : Rc
- Ⓒ Body material : Bronze
- Ⓓ Coil housing : Lead wire
- Ⓔ Coil option : Conduit CTC19
- Ⓕ Surge suppressor : Surge suppressor attached
- Ⓖ Rated voltage : 100 VAC 50/60 Hz, 110 VAC 60 Hz

Code	Description
Ⓐ Port size	
15	1/2
20	3/4
25	1
Ⓑ Thread	
A	Rc
G	G (made-to-order product)
N	NPT (made-to-order product)
Ⓒ Body material	
C	Bronze
K	Bronze/oil-prohibited
F	Stainless steel
N	Stainless steel/oil-prohibited
Ⓓ Coil housing	
4A	Lead wire
4M	Terminal box
4N	Terminal box with lamp
Ⓔ Coil option	
Blank	No option
G *1	Conduit CTC19
H *1	Conduit G1/2
Ⓕ Surge suppressor	
Blank	Without surge suppressor
S *2	Surge suppressor attached
Ⓖ Rated voltage	
AC100V	100 VAC 50/60 Hz, 110 VAC 60 Hz
AC200V	200 VAC 50/60 Hz, 220 VAC 60 Hz
AC110V	110 VAC 50/60 Hz, 121 VAC 60 Hz
AC220V	220 VAC 50/60 Hz, 242 VAC 60 Hz

Internal structure and parts list

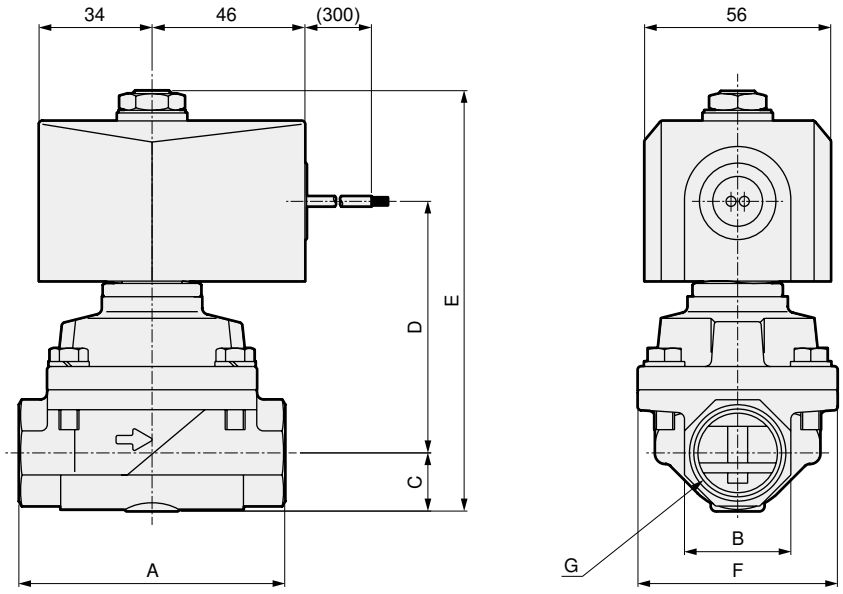


No.	Part name	Material	
1	Core assembly	SUS 405 or equiv./SUS 316L/SUS 430	Stainless steel
2	Shading coil	Cu (Ag for stainless steel body)	Copper (silver for stainless steel body)
3	Coil	-	-
4	Plunger assembly	SUS 405 or equiv./SUS 304/PFA	Stainless steel
5	Plunger spring	SUS304	Stainless steel
6	Kick spring	SUS304	Stainless steel
7	Body	CAC408(SCS13)	Bronze casting (stainless steel casting)
8	Seal	PTFE/PFA	Tetrafluoroethylene resin
9	Main valve assembly	SUS303/SUS304/PTFE	Stainless steel/tetrafluoroethylene resin
10	Seal ring set	SUS304/PTFE	Stainless steel/tetrafluoroethylene resin
11	Body	CAC408(SCS13)	Bronze casting (stainless steel casting)
12	Square ring	PTFE	Tetrafluoroethylene resin

Dimensions

● Lead wire

SPK 11-15A/20A/25A-*4A



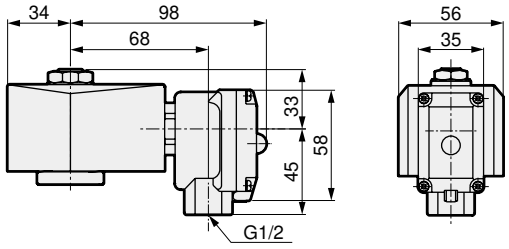
Model No.	A	B	C	D	E	F	G
SPK11-15A-*4A	71	27(29)	14.5	72	119.5	50	Rc1/2
SPK11-20A-*4A	80	32(35)	17.5	76	126.5	60	Rc3/4
SPK11-25A-*4A	90	41(45)	21.5(22.5)	82	136.5(137.5)	71	Rc1

*1 : Dimensions shown in ( ) are for stainless steel body.
*2 : The dimensions are the same for port sizes of G and NPT threads.

Optional dimensions

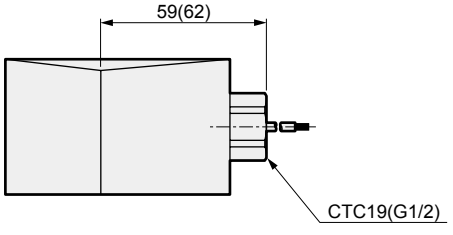
● Terminal box

SPK11-15A to 25A-*4 [M] [N]



● Conduit

SPK11-15A to 25A-*4A [G] [H]



Dimensions shown in ( ) are for G1/2.