

Compact pilot operated solenoid valve for water

FWD Series

- NC (open when energized)
- Port size: Rc1/4 to Rc1



- EXA
- FWD**
- HNB/G
- USB/G
- FAB/G
- FGB/G
- FVB
- FWB/G
- FHB
- FLB
- AB
- AG
- AP/AD
- APK/ADK
- DryAir
- EX-XPLNprf
- XPLNprf
- HVB/HVL
- S \diamond B/NAB
- LAD/NAD
- Water-Rela
- NP/NAP/NVP
- SNP
- CHB/G
- MXB/G
- Other valves
- SWD/MWD
- DustColl
- CVE/CVSE
- CCH/CPE/D
- LifeSci
- Gas-Combus
- Auto-Water
- Outdoor
- SpecFld
- Custom
- Ending

Specifications

Item	FWD11-8A	FWD11-10A	FWD11-15A	FWD11-20A	FWD11-25A
Actuation	NC (open when energized)				
Working fluid	Water (excluding sewage, agricultural water, liquid manure and antifreeze liquid)				
Working pressure differential	0.02 (\approx 2.9 psi, 0.2 bar) to 0.7 (\approx 100 psi, 7 bar)				
Max. working pressure	0.7 (\approx 100 psi, 7 bar)				
Proof pressure (water pressure)	1.05 (\approx 150 psi, 10.5 bar)				
Fluid temperature	5 (41°F) to 60 (140°F) (no freezing)				
Ambient temperature	-10 (14°F) to 60 (140°F) (no freezing)				
Atmosphere	Place free of corrosive gas and explosive gas				
Valve structure	Pilot operated poppet, diaphragm drive				
Valve seat leakage	0 (water pressure) (*1)				
Mounting orientation	Unrestricted				
Degree of protection	IPX5				
Port size	Rc1/4	Rc3/8	Rc1/2	Rc3/4	Rc1
Orifice size	15 (*2)			22 (*2)	
Cv	2.8	4.2	6.0	11.0	12.0
Weight	340	320	390	730	950
Rated voltage	100 VAC 50/60 Hz, 200 VAC 50/60 Hz, 24 VDC				
Voltage fluctuation range	Rated voltage \pm 10%				
Apparent power	When holding (50/60 Hz): 5/4, when starting (50/60 Hz): 9/8			When holding (50/60 Hz): 9.5/7, when starting (50/60 Hz): 23/20	
Power consumption	AC(50/60 Hz):2.7/2, DC:4			AC(50/60 Hz):4/3.2, DC:4	
Thermal class	Class 130 (B)				

*1 : Valve seat leakage of 0 cm³/min means that no water drop leak is observed for one minute.

*2 : Orifice size means the size of valve seat.

How to order

FWD11 - 15 A - 0 2GS B - AC100V

Model No.

A Port size

B Thread

C Body/sealant combination

D Coil option

E Mounting plate

F Rated voltage
*2



Precautions for model No. selection

*1 : Pg9 for port sizes 8, 10 and 15, and Pg11 for 20 and 25.

*2 : Rated voltages of 110 VAC, 50/60 Hz and 220 VAC, 50/60 Hz are also available. Contact CKD for details.

[Example of model No.]

FWD11-15A-02GSB-AC100V

- A** Port size : 1/2
- B** Thread : Rc thread
- C** Body/sealant combination : Copper alloy/PPS, NBR
- D** Coil option : With DIN terminal box/surge suppressor (Pg9)
- E** Mounting plate : With mounting plate
- F** Rated voltage : 100 VAC 50/60 Hz, 110 VAC 60 Hz

Code	Description	
A Port size		
8	1/4	
10	3/8	
15	1/2	
20	3/4	
25	1	
B Thread		
A	Rc thread	
G	G thread	
N	NPT thread	
C Body/sealant combination		
	Body	Seal
0	Copper alloy (port size: 8, 10, 15)/PPS	NBR
B	Bronze (port size: 20, 25)	FKM
D	Stainless steel/PPS	NBR
E		FKM
D Coil option		
2C	Grommet lead wire	
2CS	Grommet lead wire with surge suppressor	
2G	With DIN terminal box (*1)	
2GS	DIN terminal box/with surge suppressor (*1)	
2H	DIN terminal box/with lamp (*1)	
2HS	DIN terminal box/with lamp/surge suppressor (*1)	
E Mounting plate		
Blank	None	
B	Mounting plate (port size: 8, 10 and 15 only)	
F Rated voltage		
AC100V	100 VAC 50/60 Hz, 110 VAC 60 Hz	
AC200V	200 VAC 50/60 Hz, 220 VAC 60 Hz	
DC24V	24 VDC	

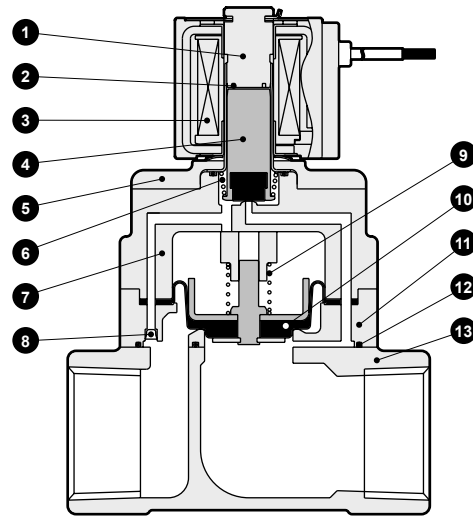
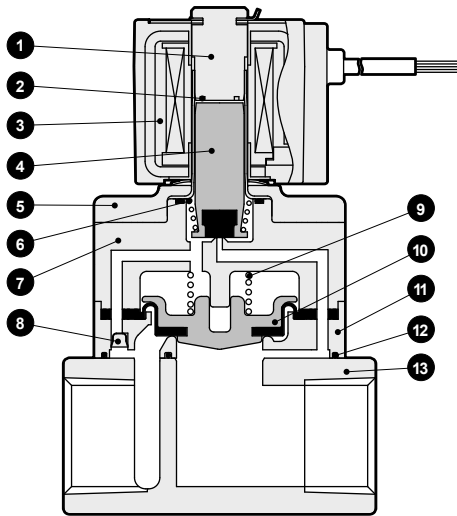
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EXA Internal structure and parts list

FWD

● FWD11-8/10/15

● FWD11-20/25



No.	Part name	Material		No.	Part name	Material	
1	Core assembly	SUS	Stainless steel	8	Filter	SUS	Stainless steel
2	Shading coil *1	Cu (Ag for stainless steel body)	Copper (silver for stainless steel body)	9	Valve spring	SUS	Stainless steel
3	Coil	-	-	10	Diaphragm assembly	Port size: 8, 10, 15;	Polyphenylene sulfide/ nitrile rubber (fluoro rubber)
4	Plunger	SUS/NBR (FKM)	Stainless steel, nitrile rubber (fluoro rubber)			Port size: 20, 25; SUS/NBR (FKM)	Stainless steel, nitrile rubber (fluoro rubber)
5	Holder plate	PPS	Polyphenylene sulfide	11	Valve body	PPS	Polyphenylene sulfide
6	Plunger spring	SUS	Stainless steel	12	Gasket	NBR (FKM)	Nitrile rubber (fluoro rubber)
7	Stuffing assembly	PPS/SUS/NBR (FKM)	Polyphenylene sulfide/Stainless steel, nitrile rubber (fluoro rubber)	13	Main body	Port size: 8, 10, 15; C3771 (SCS13)	Copper alloy (stainless steel)
						Port size: 20, 25; CAC408 (SCS13)	Copper alloy (stainless steel)

() shows options.

*1: No shading coil is used for DC coil.

Note: Screws are steel.

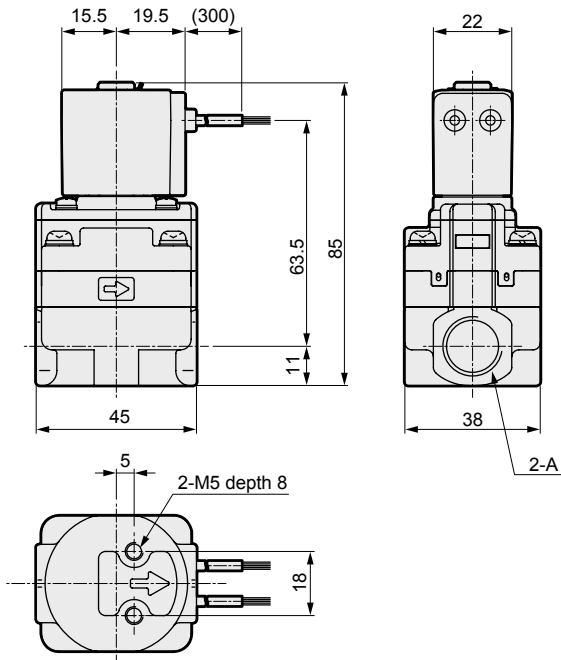
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Dimensions (port size: 8A, 10A, 15A)

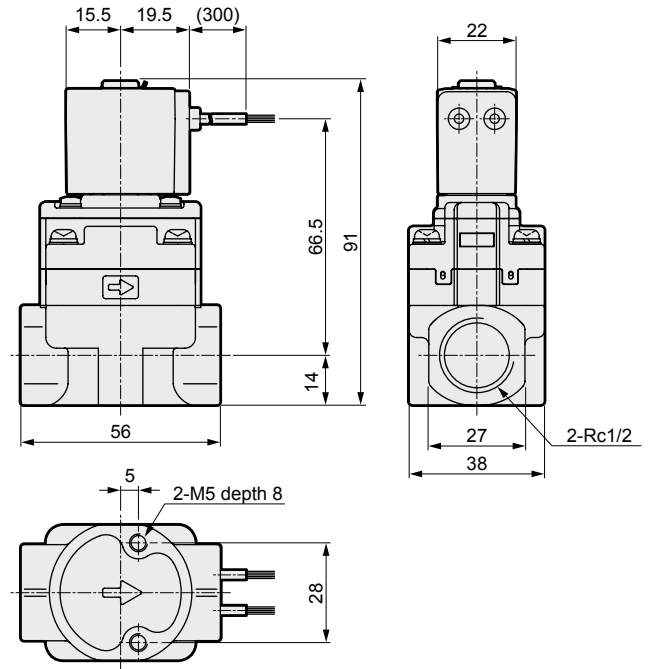


● Grommet lead wire

FWD11-8A/10A-*2C



FWD11-15A-*2C

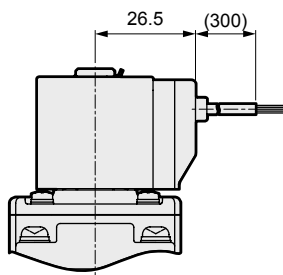


Model No.	A
FWD11-8A	Rc1/4
FWD11-10A	Rc3/8

Optional dimensions (port size: 8A, 10A, 15A)

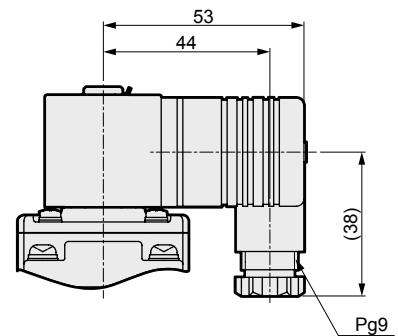
● Grommet lead wire with surge suppressor

FWD11-8A/10A/15A-*2CS



● With DIN terminal box

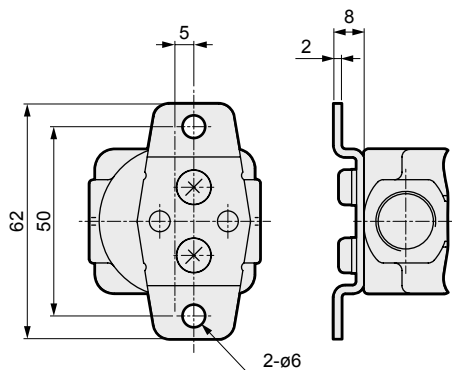
FWD11-8A/10A/15A-*2G/2GS/2H/2HS



● Mounting plate

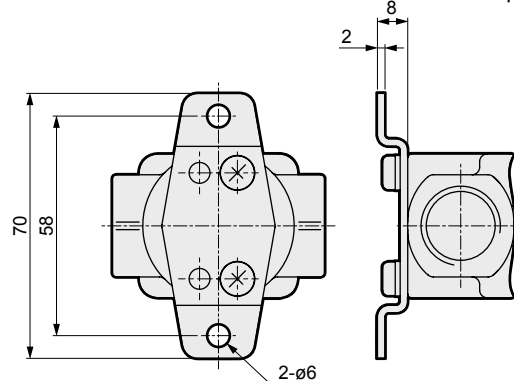
FWD11-8A/10A-***B

Material: Steel
Zinc plated



FWD11-15A-***B

Material: Steel
Zinc plated



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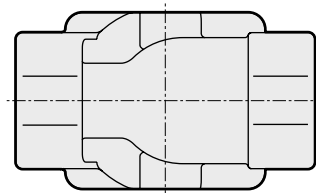
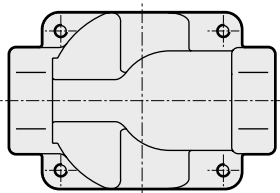
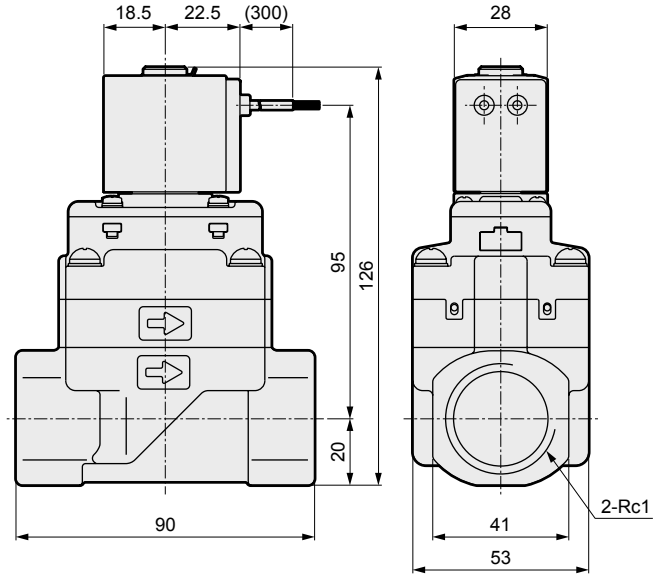
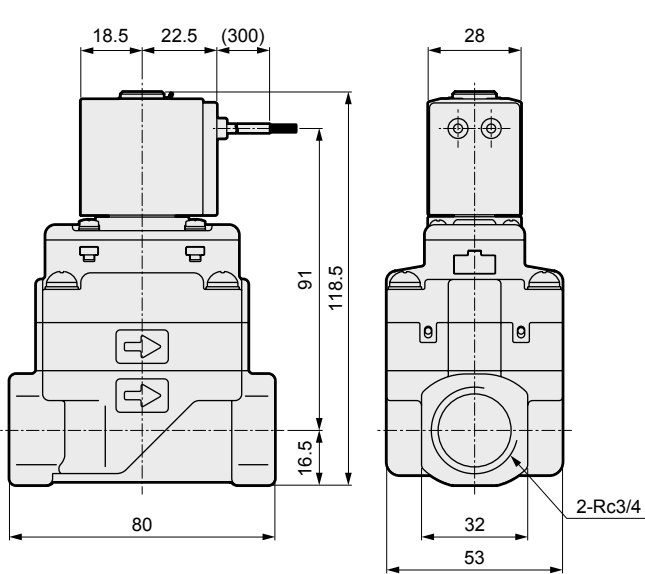
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Dimensions (port size 20A, 25A)

● Grommet lead wire

FWD11-20A-*2C

FWD11-25A-*2C



Optional dimensions (port size: 20A, 25A)

● Grommet lead wire with surge suppressor

FWD11-20A/25A-*2CS

● With DIN terminal box

FWD11-20A/25A-*2G/2GS/2H/2HS

