CHEMSUN Direct Operatede Solenoid Valves

Type A03 Series

Application: Petroleum, chemical, water treatment, power plants, nuclear power, Mining etc.

Function Way	Balanced Poppet, Universal.1/4' for Process Control Market
Explosion Protected	II 2G Ex db II C T6...T4 Gb II 2D Ex tb IIIC T80°C...T130°C Db
Temperature Range	-25 to +70°C

Product Features

- The new Explosion Proof Flameproof "d" coil valve is valid for Zone 1/21 and 2/22 application.
- The solenoid valves are recommended for pilot applications with basic flow, wide pressure ranges and no minimum operating pressure.
- Coils used in metal enclosure have class H insulation materials.
- Light and compact design, less assembly space requirement.
- Highly resistant to corrosion.
- Peak voltage suppression and AC rectifier included as standard.
- The valves are certified according to IEC/EN 61508 Functional Safety data and have SIL-3 capability (TUV certification).

Markets

- Chemical
- Petrochemical
- Processing

Applications

- Control of solenoid valves in hazardous areas Zone 1/21 and 2/22.

Mechanical Features

Materials in contact with fluid
(*)Ensure that the compatibility of the fluids in contact with the materials is verified.
Body: AISI 316L/Brass
Stem: Stainless steel
Sleeve: Stainless steel
Stopper and plunger: Stainless steel
Springs: Stainless steel
Sealings & poppets: FKM, NBR, PUR
Guide ring: PTFE

General Performance

Differential pressure: 0 - 10 bar
Response times: ⩽100 ms
Fluids (*): Air, inert gas
Ambient Temperature Range(TS) [1]

-20 to +120°C	FKM+NBR
-45 to +95°C	PUR+ NBR

HP	9W-11.2W	Basics power
BP	5.2W-5.7W	Medium power
RP	3.2W-3.6W	Reduced power
LP	1.5W-1.8W	Low power

Power consumption levels: Hot - cold electrical holding values(watt).

Specifications

Pipe size	Orifice size	Flow factory KV		Operating pressure differential(bar)		Ambient Temp.(1)		Power level	Power (cold)		Basic part number	
				Min.	Max.	Min.	Max.		AC	DC	Body	
NPT	mm	m^3/h	l/min		~/=	°C	°C	~/=	W	W	Brass	AISI 316L.
1/4	5.7	0.45	7.5	0	10	-20	120	HP	11.2	11.2	A03B*22**-H	A03R*22**-H
1/4	5.7	0.45	7.5	0	10	-20	120	BP	5.7	5.7	A03B*22**-B	A03R*22**-B
1/4	5.7	0.45	7.5	0	10	-20	120	RP	3.6	3.6	A03B*22**-R	A03R*22**-R
1/4	5.7	0.45	7.5	0	10	-20	120	LP	-	1.8	A03B*22**-L	A03R*22**-L
1/4	5.7	0.45	7.5	0	10	-45	95	HP	11.2	11.2	A03B*24**-H	A03R*24**-H
1/4	5.7	0.45	7.5	0	10	-45	95	BP	5.7	5.7	A03B*24**-B	A03R*24**-B
1/4	5.7	0.45	7.5	0	10	-45	95	RP	3.6	3.6	A03B*24**-R	A03R*24**-R
1/4	5.7	0.45	7.5	0	10	-45	95	LP	-	1.8	A03B*24**-L	A03R*24**-L

Coils, Explosion Safety code & Power Consumption

Coil insulation class: H

Electrical safety: IEC 335

Standard voltages: DC(=) 24V - 48V; available voltage variation ±10%

AC(~) 24V - 48V - 115V - 230V/50/60Hz, Other voltage are available on request.

Coil specification	High Power(HP)		Basic Power(BP)		Reduced Power(RP)		Low Power(LP)	
	Hot	Cold	Hot	Cold	Hot	Cold	Hot	Cold
	9.2W	11.2W	5.2W	5.7W	3.2W	3.6W	1.5W	1.8W
Safety code	II 2G Ex d II C Gb T6/T5/T4 II 2D Ex t IIIC Db		II 2G Ex d II C Gb T6/T5/T4 II 2D Ex t IIIC Db		II 2G Ex d II C Gb T6/T5/T4 II 2D Ex t IIIC Db		II 2G Ex d II C Gb T6/T5/T4 II 2D Ex t IIIC Db	
Electrical enclosure protection (EN 60529)	IP66/67, AL./SS		IP66/67, AL./SS		IP66/67, AL./SS		IP66/67, AL./SS	
Operator ambient temperature range(°c)(2)	-60 to +55/70/100°C		-60 to +65/80/110°C		-60 to +65/80/110°C		-60 to +65/80/110°C	

Explanation of Temperature Ranges of Solenoid Valves

(1) Valve temperature range:

The valve temperature range (TS) is determined by the selected seal material, the temperature range for proper operation of the valve and sometimes by the fluid.

(2) Operator ambient temperature range:

The operator ambient temperature range is determined by the selected power level and the safety code.

Total temperature range:

The temperature range of the complete solenoid valve is determined by the limitations of both temperature ranges above.

How to Order

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	0	3	R	N	2	4	M	O	-	L	R	D	N	C	2

4: Body material

B	Brass
R	SS.316L

8, 9: Manual operator selection

MN	None manual operator function
MO	Manual operator function
MS	Manual reset function

12,13,14: Coil type and cable thread

ADN	NPT1/2	Flameproof-Aluminum, "d" type Ex housing (EN/IEC 60079-1, 60079-31)
ADM	M20×1.5	
RDN	NPT1/2	Flameproof-316L SS, "d" type Ex housing (EN/IEC 60079-1, 60079-31)
RDM	M20×1.5	

5,6: Body pipe size

N2	1/4"NPT
N4	1/2"NPT
G2	1/4"BSPP
G4	1/2"BSPP

11: Coil power level

H	High power, 9.0-11.2W
B	Basic power, 5.2-5.7W
R	Reduce power, 3.2-3.6W
L	Low power, 1.5-1.8W

15,16: Coil voltage

C1	12VDC	HP, BP, RP, LP Available
C2	24VDC	HP, BP, RP, LP Available
C4	48VDC	HP, BP, RP, LP Available
C5	110VDC	HP, BP, RP, LP Available
3N	125VDC	HP, BP, RP Available
B1	24V/50Hz	HP, BP, RP Available
B2	24V/60Hz	HP, BP, RP Available
E6	100V/50Hz	HP, BP, RP Available
0A	110-120V/50Hz	HP, BP, RP Available
F2	200V/50Hz	HP, BP, RP Available
3D	220-230V/50Hz	HP, BP, RP Available
K7	110V/60Hz	HP, BP, RP Available
3K	110-120V/60Hz	HP, BP, RP Available
J2	200V/60Hz	HP, BP, RP Available
7J	220-230V/60Hz	HP, BP, RP Available

7: Ambient temp.

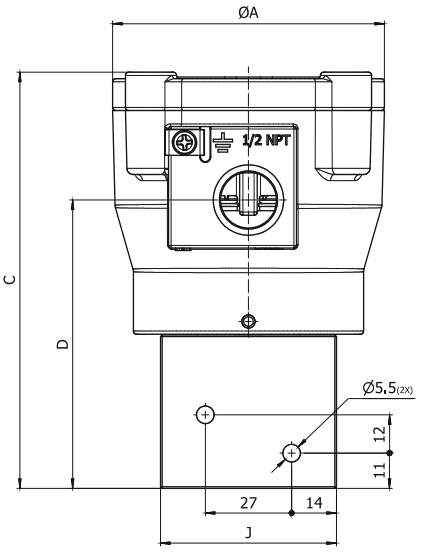
2	-20°C to120°C
4	-45°C to 90°C

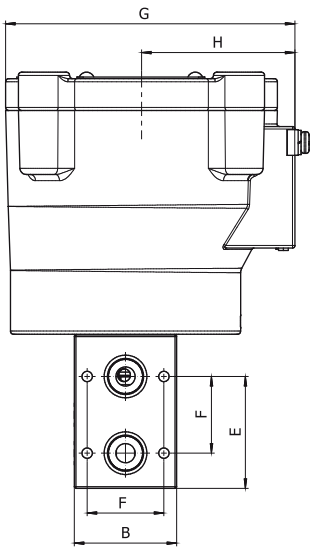
Spare Parts Kit

Exhaust protector

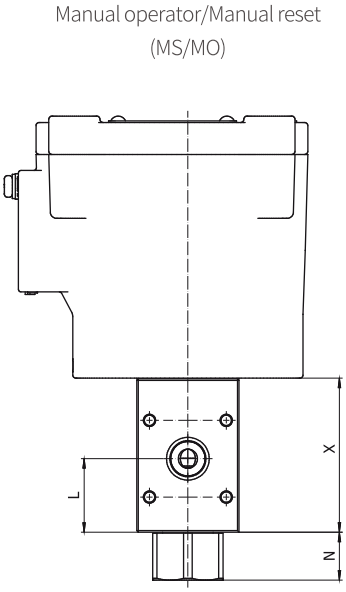
Part Number	Thread	Pipe Size	Material	Mesh/Filtering	Wrench Size (Ref A.)
0683 00 14	NPT	1/4	316L	100-200μm	16mm

Dimensions, Weight



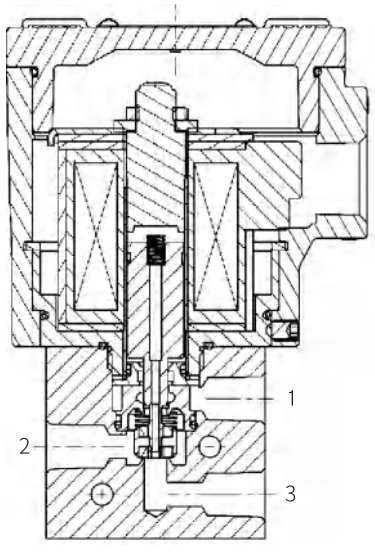


Manual operator/Manual reset
(MS/MO)



Coil Type	A	B	C	D	E	F	G	H	J	L	N	X	Weight(kg)
RN	85	32	130	90	35	24	91	48	55	23	54	48	2.78
AN	85	32	130	90	35	24	91	48	55	23	54	48	1.75

Sectional Drawings



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