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DSG-03 series solenoid operated directional valves

MACHYDRA

CONTENT

1. The design of solenoid and runner process large electromagnetic suction, which make this productsuitable for high pressure large flow.
2. The design of electromagnetic suction that matches the valve and improve the spring force makes this valve operated reliably in the polluted working environment.
3. Excellent electrical waterproof and dust-proof features
4. Solenoid coil, whose shell's protection class is IP65, and usually configuring DIN43650 ISO4400 EN 175301-803 standard plug. Higher protection class AMP, DEUTSCH plugs can also be configured or using irradiation as the power line of the solenoid directly.



ORDERING DETAILS

DS G 03 3C2 D24 _ B

Series code
DS = Solenoid operated directional valves

Installation mode
G = Subplate mounting

Size
03 = NG 10

Spool symbol

Voltage
D12 = DC12V **D24** = DC24V
A110 = AC110V-50HZ **A220** = AC220V-50HZ
R110 = RAC110V **R220** = RAC220V (R means AC with rectifier)

Connector
H = DIN43650 Type Plug
B = with terminal box

Push rod
NP = With self-locking emergency push rod
P = With manual push rod

TECHNICAL DATA

General Data

The total weight of one solenoid valve (with two solenoids)	kg	4.8
The total weight of one solenoid valve (with one solenoid)	kg	3.50
Installation site		Optional position
Operating temperature	°C	~20~+50 (adopt NBR seal ring)

Hydraulic Data

Maximum operating pressure fluid ports P, A and B	bar	315
The highest dynamic oil pressure T cavity can bear	bar	160
The highest static oil pressure T cavity can bear	L/min	20
Rated flow	L/min	120
Liquid medium		Mineral hydraulic oil, Phosphate hydraulic oil
The oil temperature range	°C	-20~+80
The oil cleanliness		ISO4572:β10≥75 NAS1638:Class9

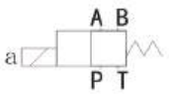
Electric Data

Voltage category		DC, RAC(coil with a rectifier component)				
Duty cycle	ED	100%				
Voltage allowable fluctuation range	%	-10~+10				
The reserving and resetting time	ms	on:150; off:80 (do not include RAC type)				
Maximum rev frequency	Hz	3				
Coil insulation class		class B				
The maximum operating temperature coil allowed		130				
Coil weight	kg	0.82				
Voltage	V	12	24	110	110	220
Power types		DC	DC	DC	RAC	RAC
Power frequency	Hz				50/60	50/60
Power consumption	W	46	46	46	54	54
Coil resistance(20°C)	ohm	3.2	12.5	1050	49	110
Operating current (20°C)	A	3.75	1.92	0.21	0.56	0.28

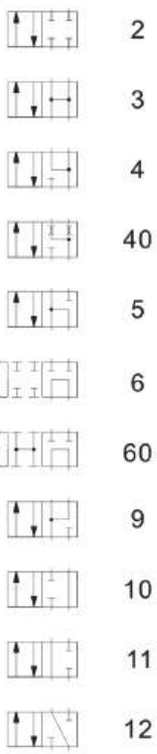
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SYMBOLE

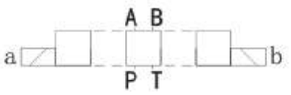
single solenoid valve (spring return)



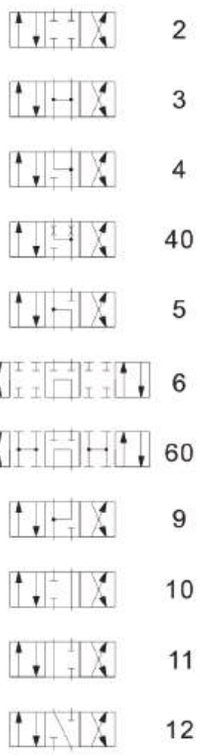
2B * BL



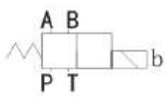
double solenoid valve (three position, spring centralizing)



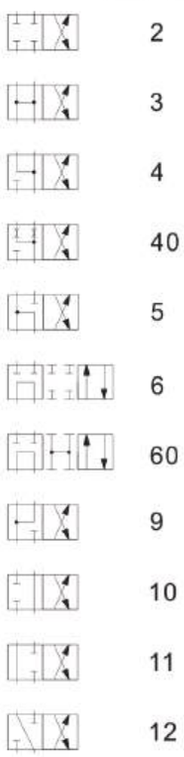
3C *



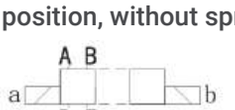
single solenoid valve (spring return)



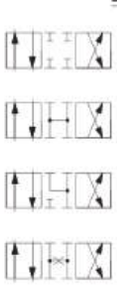
2B * B



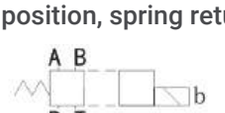
two position, without spring



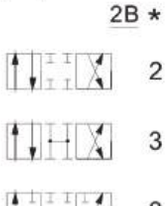
2N *

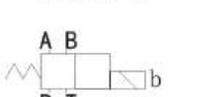


two position, spring return



2B *

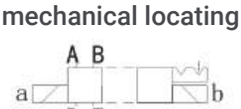




2B * A



two position, mechanical locating

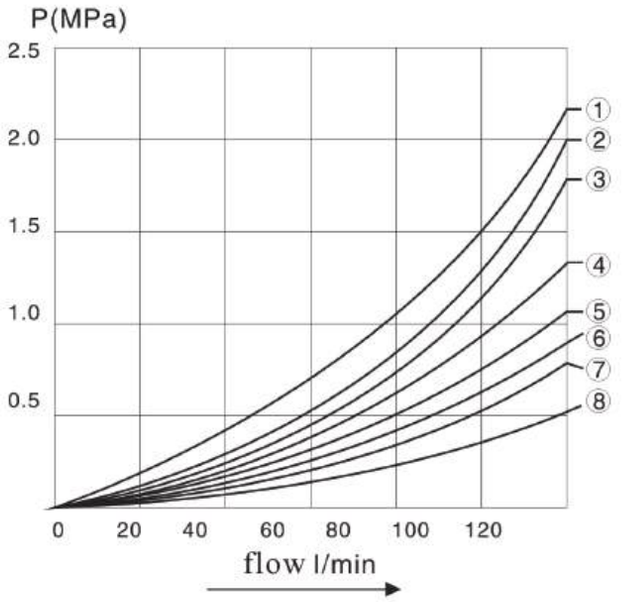


2D *



CHARACTERISTIC CURVE

【Pressure drop-flow character】



flow-pressure drop feature △P=f(Q)

spool symbol	character				
	P→A	B→T	P→B	A→T	P→T
3C2	6	6	6	6	–
3C3	7	7	7	7	5
3C4	6	7	6	7	–
3C40	6	7	6	7	–
3C5	5	2	2	5	8
3C6	2	2	2	2	5
3C60	1	1	1	1	4
3C9	7	6	7	6	–
3C12	6	6	6	7	–
3C11	7	6	6	6	–
2B2	2	2	6	6	–
2B3	3	3	6	6	–
2B8	5	–	5	–	–
2B2–L	6	6	2	2	–
2B3–L	6	6	3	3	–
2B8–L	5	–	5	–	–

Test condition:
Pressure: 7Mpa
Flow: 120L/min
Viscosity: 35cst

【Viscosity change】

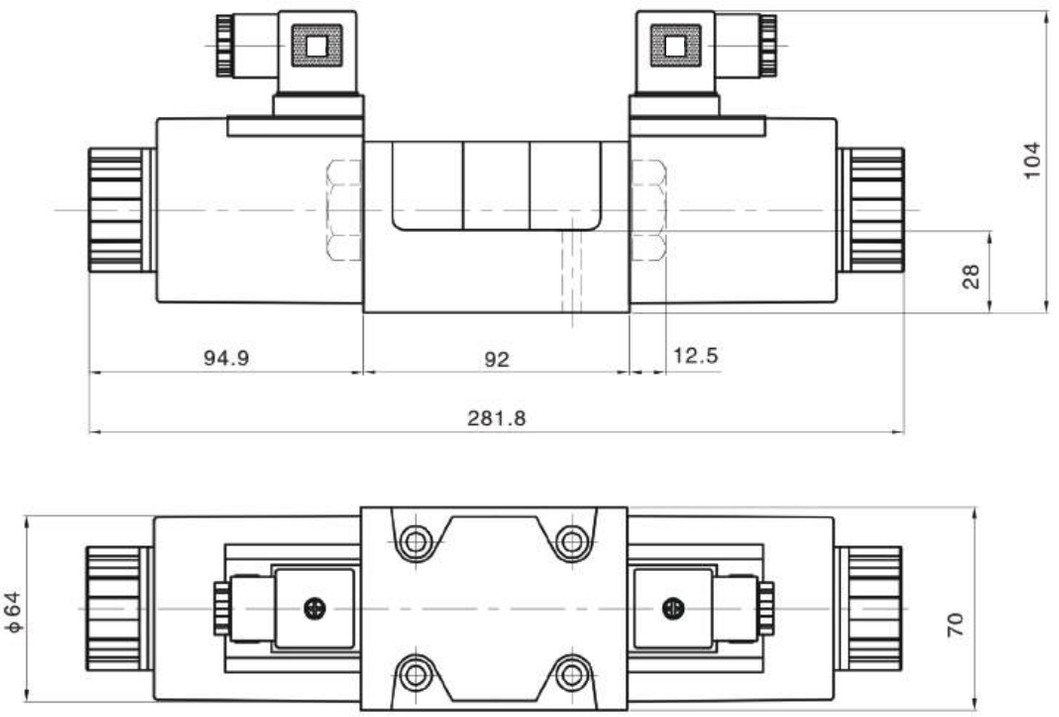
viscosity	cSt	15	20	30	40	50	60	70	80	90	100
	SSU	77	98	141	186	232	278	324	371	417	464
coefficient (G´)		0.81	0.87	0.96	1.03	1.09	1.14	1.19	1.23	1.27	1.30

As for other proportion (G') pressure drop can accord to formula △P'=△P(G' 0.85)to calculate

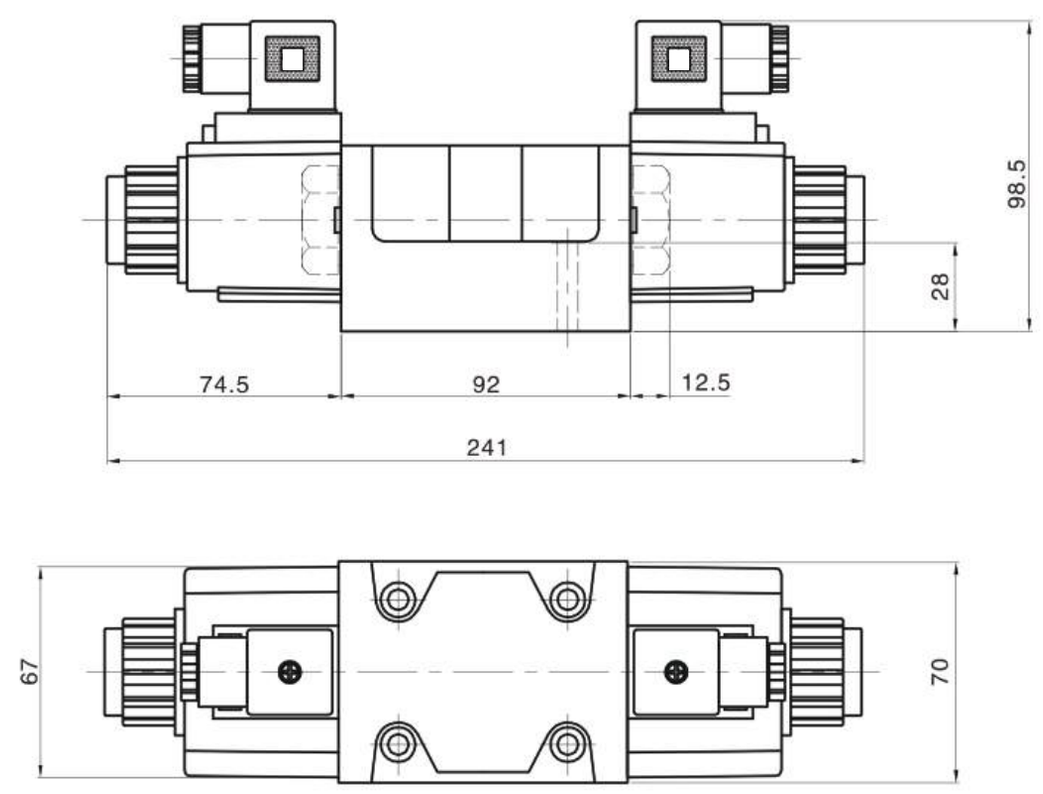
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UNIT DIMENSIONS

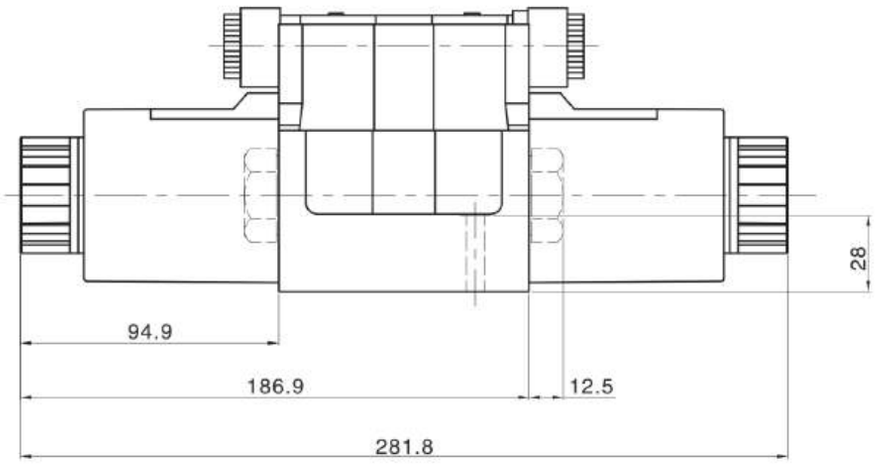
DSG 03-DC-H

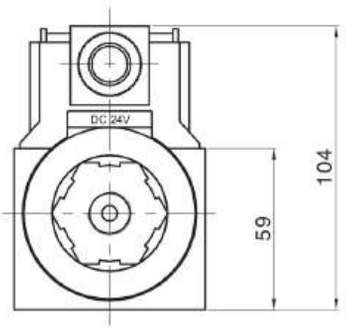


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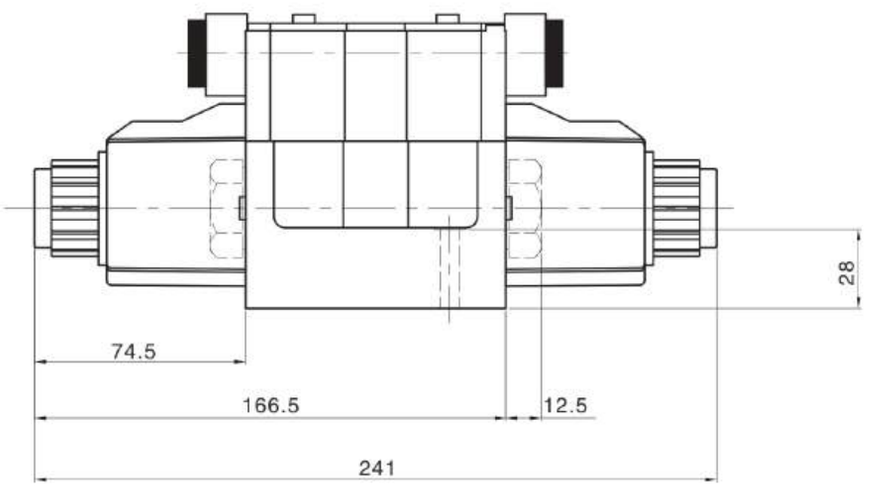


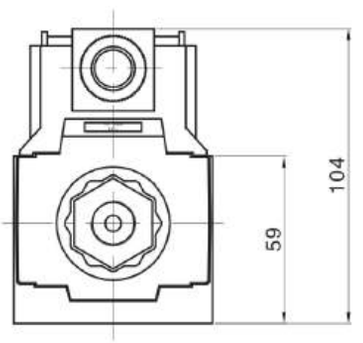
DSG 03-DC-B





DSG 03-AC-B







the surface of mating parts request precision process

