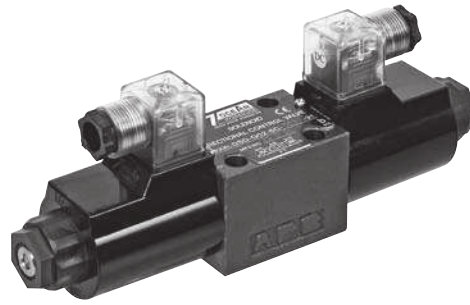


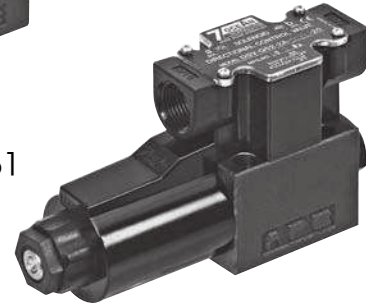
SOLENOID OPERATED DIRECTIONAL CONTROL VALVE DSV / DSD-G02 SIZE 6

FEATURES :

- Highest performance in NG 6
- Optimized spool design to reduce flow force
- Proven quality through 10 million endurance test
- Coil outside cover with BMC fire proof material
- Surge suppressor inside DC wiring box type
- Connections to DIN, ISO and CETOP



Model:
DSD-G02-* *-DC24-31



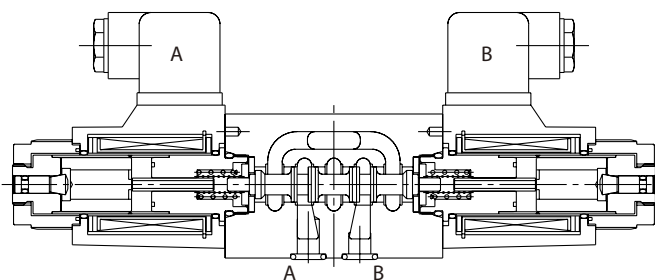
Model: DSV-G02-* *-DC24-20

SPECIFICATION :

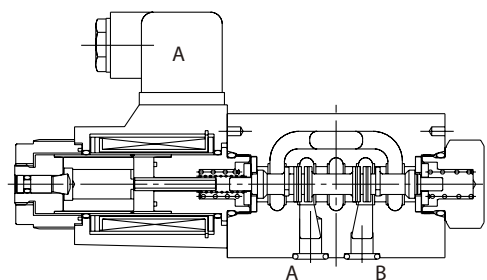
Maximum Flow Rate		80 L/Min (21 GPM)
Maximum Operating Pressure		250 Bar (3571 PSI)
Maximum Permissible Back Pressure		140 Bar (2000 PSI)
Ambient Temperature Range		-15°C~+50°C
Hydraulic Fluid Temperature		-15°C~+70°C
Viscosity Range		15~400 mm ² /s
Hydraulic Oil		ISO VG32, 46, 68
Fluid Cleanliness		25 μm
Degree of Protection		IEC 144 Class IP 65
Maximum Change over Frequency		240 Times/Min (AC/DC)
		120 Times/Min (RF)
Mounting Pattern		ISO 4401-AB-03-4-A
Approx. Weight (Kg)	Single solenoid (AC/DC)	1.7 kg(DC/RF) / 1.6 kg(AC)
	Double solenoid (AC/DC)	2.1 kg(DC/RF) / 2.0 kg(AC)
Valve Fixing Screws	Metric	M5 x 45L (4pcs)
	Inch	10#~24UNCx1-3/4"L (4pcs)
Tightening Torque		5~7Nm

CROSS SECTION DIAGRAM:

■ DSD-G02-2C-A*-31



■ DSD-G02-2A-A*-31



SOLENOID OPERATED

DIRECTIONAL CONTROL VALVE

DSV / DSD-G02 SIZE 6

ORDERING CODE :

DSV - G 02 - 2 C - A110 - 20 - **

1 2 3 4 5 6 7 8

1 DIRECTIONAL CONTROL VALVE

DSV: Wiring housing with G1/2 thread and indicator light
DSD: DIN 43650 Coils

2 MANIFOLD OR SUBPLATE MOUNTING

3 NOMINAL VALVE SIZE:

NG 6, CETOP 3 and ISO 4401-03 (NFPA-D03/DIN 24340)

4 TYPE OF SPOOL (CENTER CONDITION)

0	1	2	3	5	6
7	8	11	22	31	33

- 0: Open center (All ports) 7: Open center (P to A, B)
 1: Open center (P, A to T) 8: Tandem center (P to T)
 2: Closed center (All ports) 11: Open center (P, B to T)
 3: Closed center (P, B) 22: Closed center (Two way)
 5: Closed center (T, B) 31: Closed center (P, A)
 6: Closed center (P only) 33: Closed center (Bleed A,B)

5 SPRING CRACKING PRESSUE

- A: Spring offset to port "A" single solenoid
 AL: Spring offset to port "B" single solenoid
 B: Spring centered-single solenoid
 BL: Spring centered-single solenoid
 C: Spring centered-double solenoid
 N: Without spring with detent

6 ELECTRIC POWER SOURCE INDICATION

- A110: AC100V, 50/60 Hz; AC110V, 60 Hz
 A120: AC110V, 50 Hz; AC120V, 60 Hz
 A220: AC200V, 50/60 Hz; AC220V, 60 Hz
 A240: AC220V, 50 Hz; AC240V, 60 Hz
 DC12: DC12V
 DC24: DC24V
 R110: AC110V, 60 Hz; Rectifier built-in type
 R220: AC220V, 60 Hz; Rectifier built-in type

7 DESIGN NUMBER

- 10: Old Design Number
 20: New Design Number
 31: Connector with indicator light

8 OPTIONAL INQUIRY

- LS: Surge Killer

SOLENOID OPERATED

DIRECTIONAL CONTROL VALVE DSV / DSD-G02 SIZE 6

SPOOL TYPES:

Position type at neutral	Double solenoid valves, spring centered -C-	Single solenoid valves, solenoid at port A end -B-	Single solenoid valves, solenoid at port B end -BL-
0 (H)	DSV-G02-0C 	DSV-G02-0B 	DSV-G02-0BL
1 (F)	DSV-G02-1C 	DSV-G02-1B 	DSV-G02-1BL
2 (E)	DSV-G02-2C 	DSV-G02-2B 	DSV-G02-2BL
	/	DSV-G02-2F 	DSV-G02-2FL
3 (L)	DSV-G02-3C 	DSV-G02-3B 	DSV-G02-3BL
5	DSV-G02-5C 	DSV-G02-5B 	DSV-G02-5BL
6 (J)	DSV-G02-6C 	DSV-G02-6B 	DSV-G02-6BL
7 (M)	DSV-G02-7C 	DSV-G02-7B 	DSV-G02-7BL
8 (G)	DSV-G02-8C 	DSV-G02-8B 	DSV-G02-8BL
11 (P)	DSV-G02-11C 	DSV-G02-11B 	DSV-G02-11BL
31 (U)	DSV-G02-31C 	DSV-G02-31B 	DSV-G02-31BL
33 (W)	DSV-G02-33C 	DSV-G02-33B 	DSV-G02-33BL

*() : Rexroth Model

SOLENOID OPERATED

DIRECTIONAL CONTROL VALVE DSV / DSD-G02 SIZE 6

SPOOL TYPES:

Position type during transition	Double solenoid valves, spring centered -N-	Single solenoid valves, solenoid at port A end -A-	Single solenoid valves, solenoid at port B end -AL-
0 (H)	/	DSV-G02-0A A B a P T	DSV-G02-0AL A B b P T
2 (E)	DSV-G02-2N A B a b P T	DSV-G02-2A A B a P T	DSV-G02-2AL A B b P T
6 (J)	/	DSV-G02-6A A B a P T	DSV-G02-6AL A B b P T
7 (M)	/	DSV-G02-7A A B a P T	DSV-G02-7AL A B b P T
22 (A)	/	DSV-G02-22A A B a P T	DSV-G02-22AL A B b P T

*() : Rexroth Model

FEATURES OF ELECTRO-MAGNETIC COIL :

Solenoid Classification	Power Source	Voltage (V)	Frequency (Hz)	Holding Current (A)	Inrush Current (A)	Holding Power (W)	Permissible Voltage (V)	Insulation Grade	Coil Insulation Class	Insulation Resistance (MΩ)
AC	A110	AC100V	50	0.44	2.22	25.2	90~110	B	H (180°C)	>50
			60	0.33	2.05	18.7	90~110			
	A120	AC110V	60	0.40	2.29	24	100~120			
			50	0.43	2.08	26.4	100~120			
	A220	AC200V	50	0.29	1.26	32	190~210			
			60	0.21	1.11	23.7	190~210			
		AC220V	60	0.25	1.12	24.4	210~230			
			50	0.19	0.90	24.8	210~230			
A240	AC240V	50	0.19	0.90	24.8	210~230				
		60	0.17	0.87	21.6	230~250				
DC	DC12	DC12V	-	1.91	-	22	10.8~13.2	B	H (180°C)	>50
	DC24	DC24V	-	1.12	-	26.5	21.6~26.4			
RF	R110	AC110V, 60HZ DC99V		0.33	-	30	90~110	B	H (180°C)	>50
	R220	AC220V, 60HZ DC198V		0.16	-	30	190~220			

SOLENOID OPERATED DIRECTIONAL CONTROL VALVE DSV / DSD-G02 SIZE 6

PERFORMANCE FIGURES & CURVES:

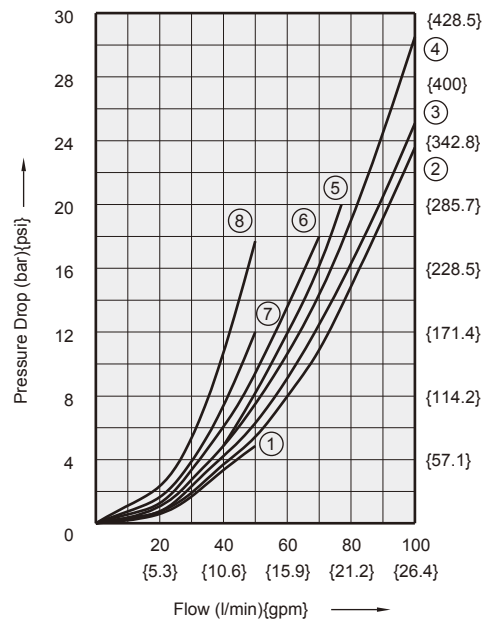
Pressure Drop Curve Reference Chart

Viscosity of Hydraulic Fluid: 20 mm²/s

Spool Type	C, B, BL				
	Control Position				
	P→A	B→T	P→B	A→T	P→T
0 (H)	4	1	4	1	5
1 (F)	6	8	6	8	7
2 (E)	4	2	4	2	-
3 (L)	5	2	5	2	-
6 (J)	5	2	5	2	-
7 (M)	4	3	4	3	-
8 (G)	6	8	6	8	7
11 (P)	6	8	6	8	7
31 (U)	5	2	5	2	-
33 (W)	5	2	5	2	-

Spool Type	A, AL			
	Control Position			
	P→A	B→T	P→B	A→T
0 (H)	4	2	4	2
2 (E)	4	6	4	6
6 (J)	5	2	5	2
7 (M)	4	3	4	3
22 (A)	4	-	4	-

Spool Type	N			
	Control Position			
	P→A	B→T	P→B	A→T
2 (E)	3	4	3	4



WIRING:

DSV-G02-*C-*-20	DSD-G02-*-*-31
<p>Note:</p> <ol style="list-style-type: none"> 1. COM terminal is fitted in double solenoid valve for easiness of wiring. 2. Use an earth terminal when ground wiring is necessary. 3. Use a compressed terminal for M3. 4. Fasten the screw of the terminal with 0.5~0.7 N.m (4.3~6.1 lbs) torque. 	

SOLENOID OPERATED DIRECTIONAL CONTROL VALVE

DSV / DSD-G02 SIZE 6

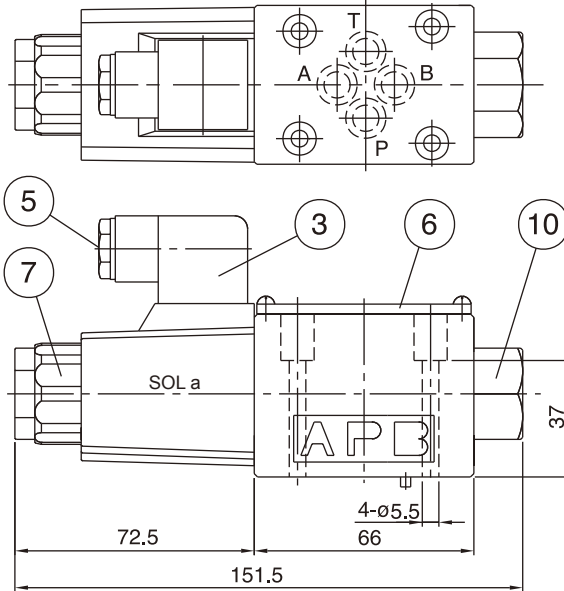
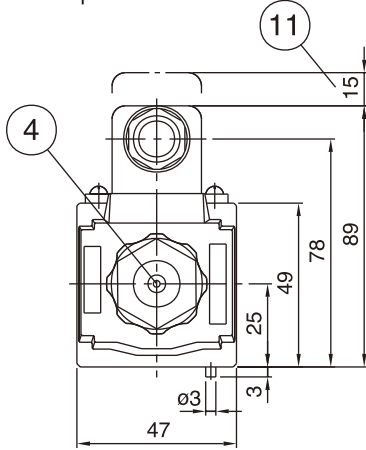
DIMENSIONS:

AC solenoid (DSD Type)

■ DSD-G02- *A-A*-31

*B

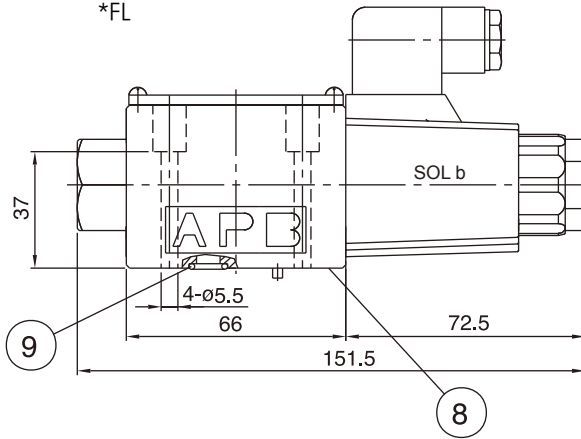
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■ DSD-G02- *AL-A*-31

*BL

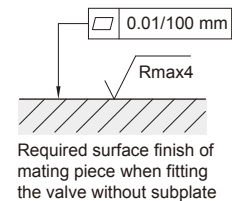
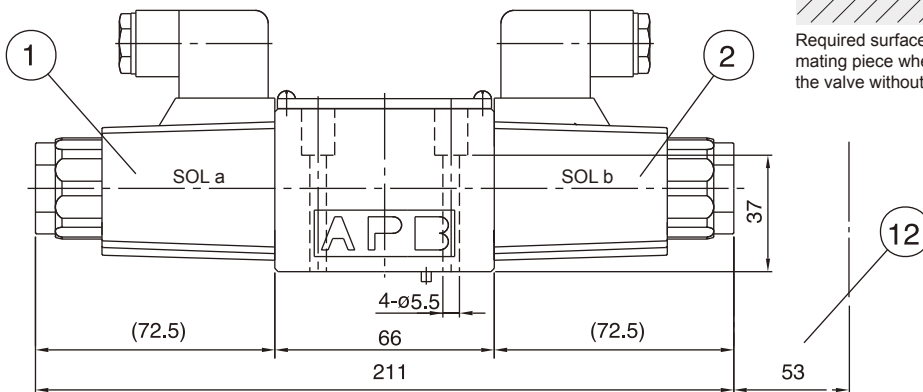
*FL



- 1: Solenoid a
- 2: Solenoid b
- 3: Angled plug to DIN 43650
- 4: Push pin for manual operation
- 5: Lead wire take-out (Cable diameter $\varnothing 8\sim 10\text{mm}$)
- 6: Nameplate
- 7: Lock nut with torque in the range $4\sim 5\text{ N.m}$
- 8: Connections to DIN 24340 (NG6, ISO 4401-AB-03-4-A); valve fixing screws M5x45; tightening torques $5\sim 7\text{ Nm}$
- 9: O-ring 1B~P9
- 10: Hex nut (for single solenoid)
- 11: Space required to remove plug
- 12: Coil removable length

■ DSD-G02- *C-A*-31

*N



SOLENOID OPERATED DIRECTIONAL CONTROL VALVE DSV / DSD-G02 SIZE 6

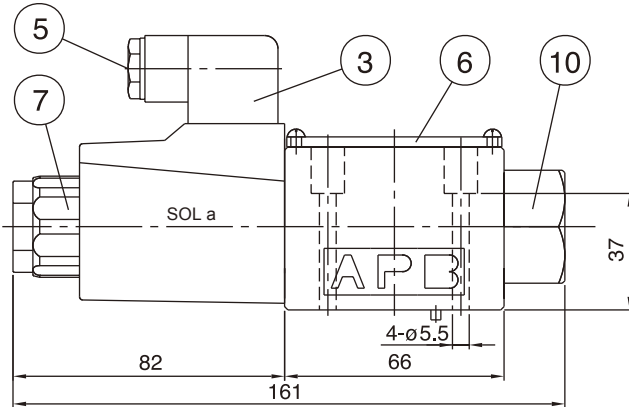
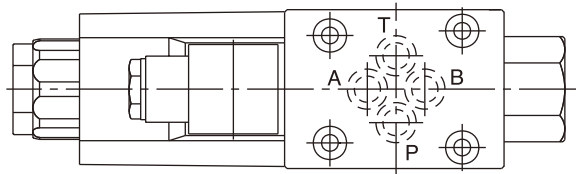
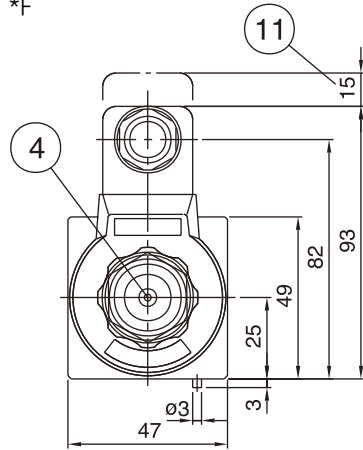
DIMENSIONS:

DC solenoid (DSD Type)

■ DSD-G02- *A-DC*-31

*B

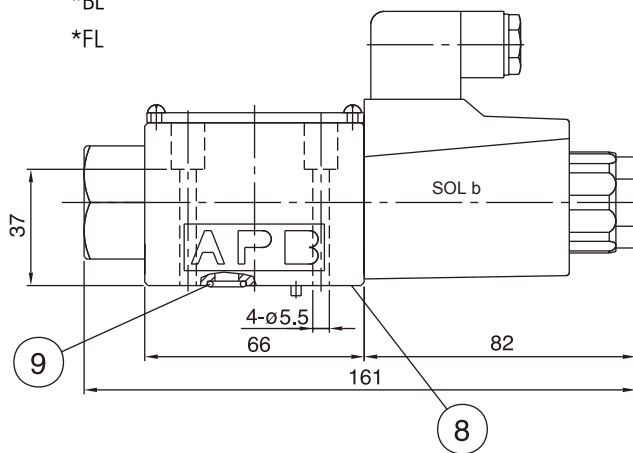
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■ DSD-G02- *AL-DC*-31

*BL

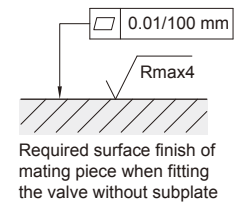
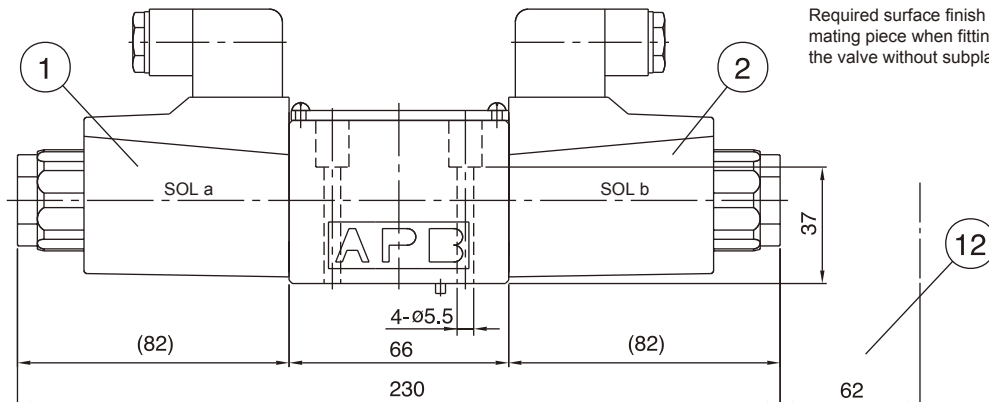
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- 1: Solenoid a
- 2: Solenoid b
- 3: Angled plug to DIN 43650
- 4: Push pin for manual operation
- 5: Lead wire take-out (Cable diameter $\varnothing 8\sim 10\text{mm}$)
- 6: Nameplate
- 7: Lock nut with torque in the range 4~5 Nm
- 8: Connections to DIN 24340 (NG6, ISO 4401-AB-03-4-A); valve fixing screws M5x45; tightening torques 5~7 Nm
- 9: O-ring 1B~P9
- 10: Hex nut (for single solenoid)
- 11: Space required to remove plug
- 12: Coil removable length

■ DSD-G02- *C-DC*-31

*N



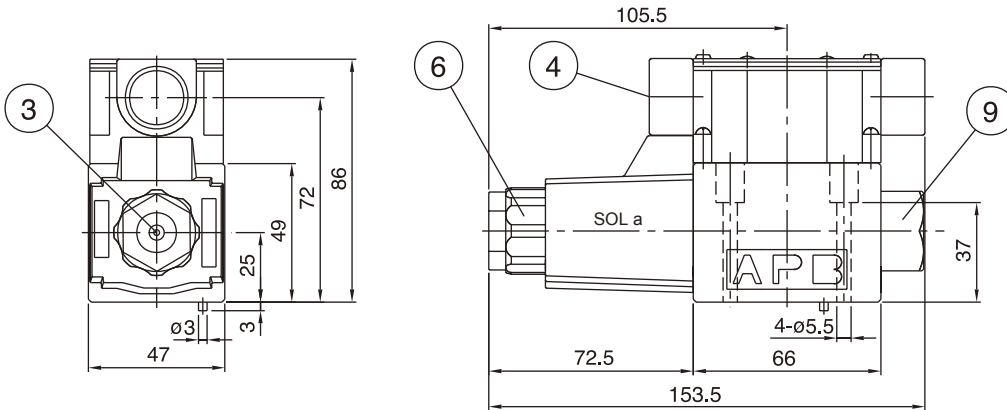
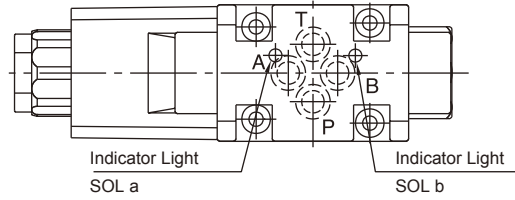
SOLENOID OPERATED DIRECTIONAL CONTROL VALVE

DSV / DSD-G02 SIZE 6

DIMENSIONS:

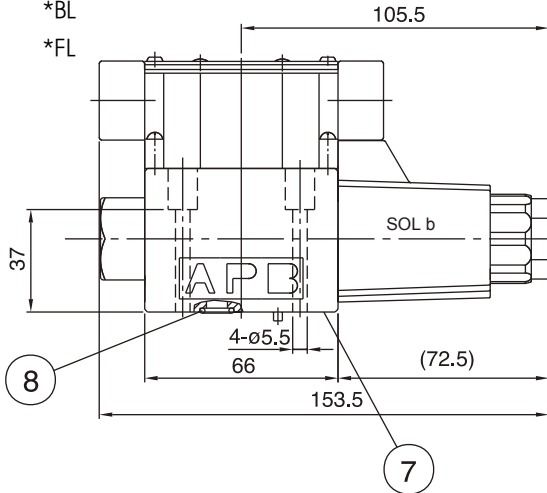
AC solenoid (DSV Type)

- DSV-G02- *A-A*-20
- *B
- *F



- DSV-G02- *AL-A*-20

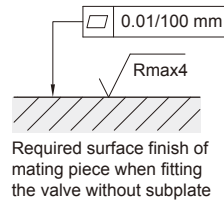
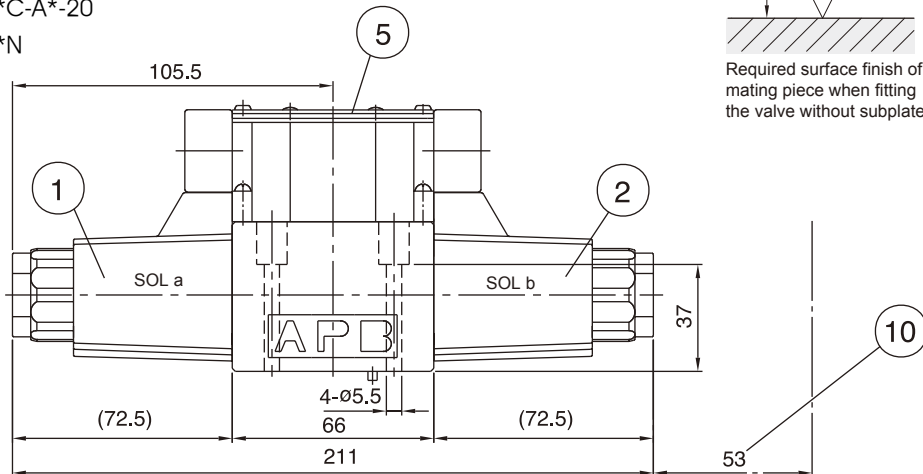
- *BL
- *FL



- 1: Solenoid a
- 2: Solenoid b
- 3: Push pin for manual operation
- 4: Lead wire take-out (G1/2")
- 5: Nameplate
- 6: Lock nut with torque in the range 4~5 Nm
- 7: Connections to DIN 24340 (NG6, ISO 4401-AB-03-4-A); valve fixing screws M5x45; tightening torques 5~7 Nm
- 8: O-ring 1B~P9
- 9: Hex nut (for single solenoid)
- 10: Coil removable length

- DSV-G02- *C-A*-20

- *N



SOLENOID OPERATED DIRECTIONAL CONTROL VALVE DSV / DSD-G02 SIZE 6

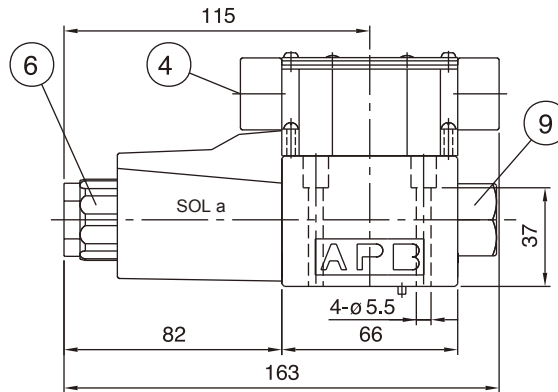
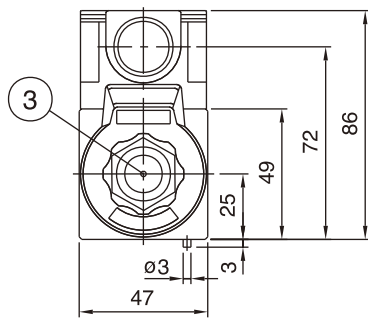
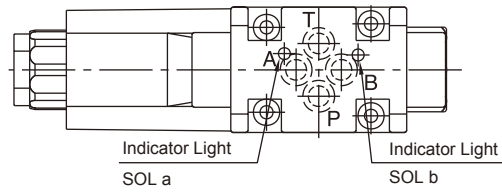
DIMENSIONS:

DC solenoid (DSV Type)

■ DSV-G02- *A-DC*-20

*B

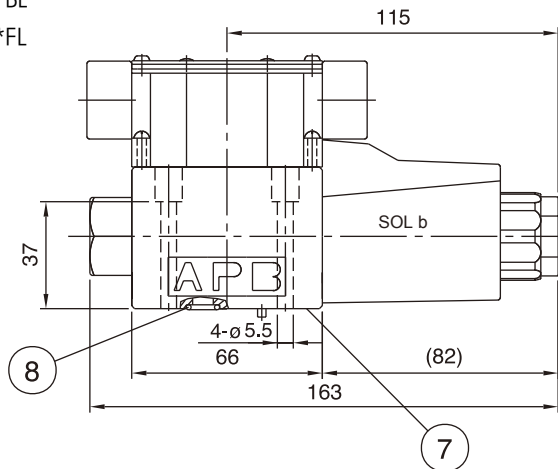
*F



■ DSV-G02- *AL-DC*-20

*BL

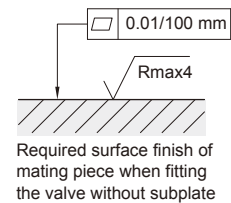
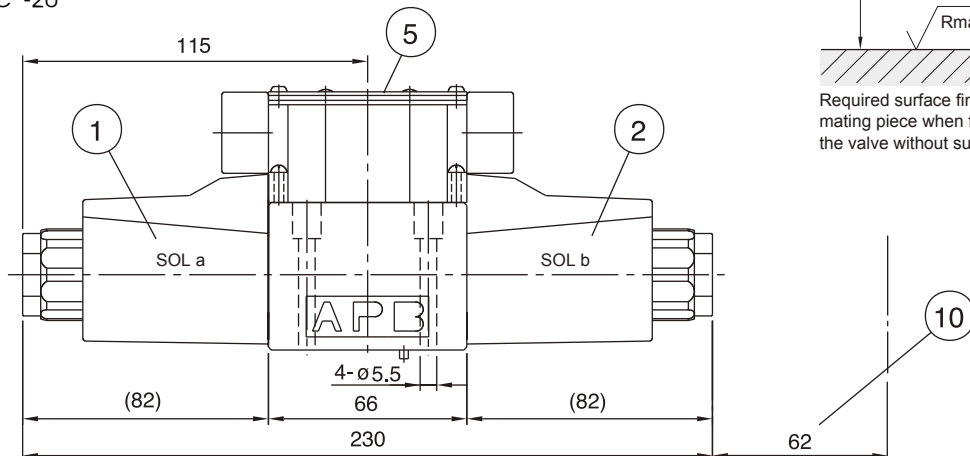
*FL



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- 8: O-ring 1B~P9
- 9: Hex nut (for single solenoid)
- 10: Coil removable length

■ DSV-G02- *C-DC*-20

*N



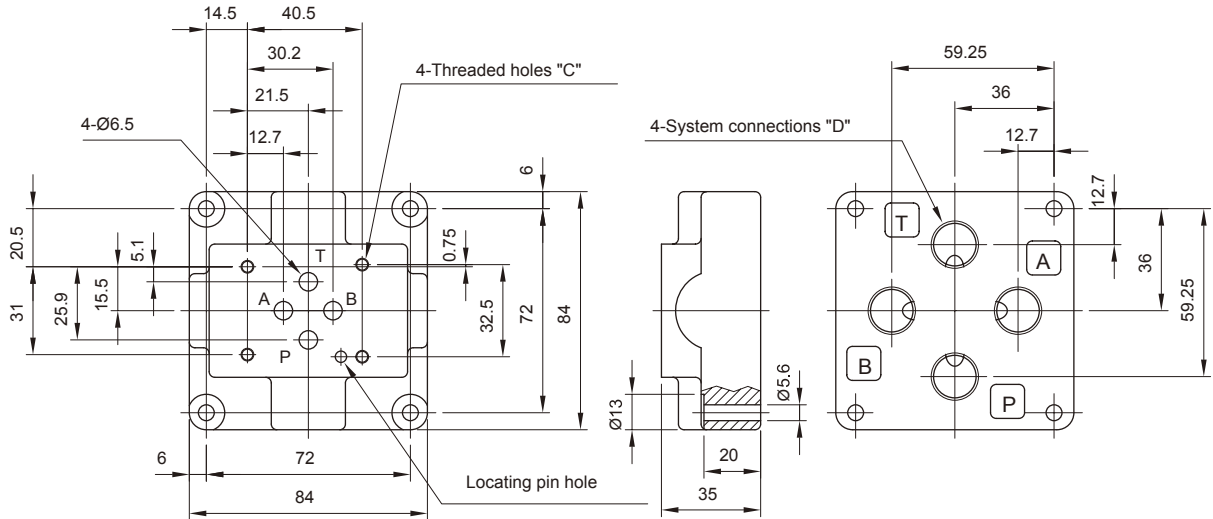
SOLENOID OPERATED

DIRECTIONAL CONTROL VALVE DSV / DSD-G02 SIZE 6

SUBPLATE DIMENSIONS:

Bottom Connection

■ DGSP-03*-*

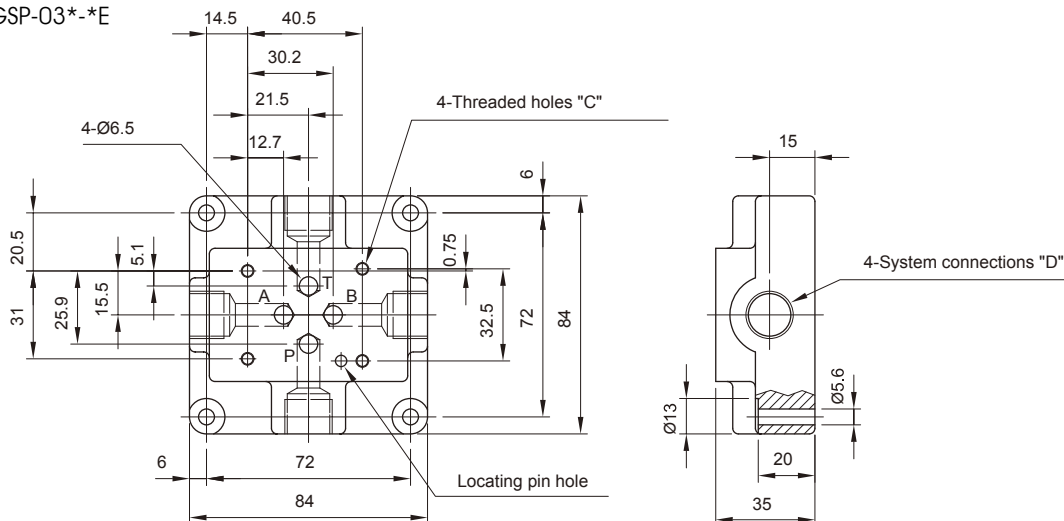


Model	C	D	Weight
DGSP-03-6		3/8" Rc	1.4 kgs
DGSP-03-8	M5x14 Deep (min)	1/2" Rc	
DGSP-03G-6	Full Thread Depth	3/8" BSP	
DGSP-03G-8		1/2" BSP	

Model	C	D	Weight
DGSP-03N-6		3/8" NPT	1.4 kgs
DGSP-03N-8	NO.10-24UNC-2B Thd. x 1/2" Deep	1/2" NPT	
DGSP-03S-6	Full Thread Depth	3/8" SAE	
DGSP-03S-8		1/2" SAE	

Side Connection

■ DGSP-03*-*E



Model	C	D	Weight
DGSP-03-6E		3/8" Rc	1.4 kgs
DGSP-03-8E	M5x14 Deep (min)	1/2" Rc	
DGSP-03G-6E	Full Thread Depth	3/8" BSP	
DGSP-03G-8E		1/2" BSP	

Model	C	D	Weight
DGSP-03N-6E		3/8" NPT	1.4 kgs
DGSP-03N-8E	NO.10-24UNC-2B Thd. x 1/2" Deep	1/2" NPT	
DGSP-03S-6E	Full Thread Depth	3/8" SAE	
DGSP-03S-8E		1/2" SAE	