

**SOLENOID CONTROLLED PILOT  
OPERATED DIRECTIONAL VALVE DG07 SIZE 16**

**FEATURES :**

- Highest performance in NG 16
- Optimized spool design to reduce flow force
- Proven quality through 10 million endurance test
- Manual overrides standard
- P port pilot pressure insert for open center spools
- Connections to DIN, ISO and CETOP



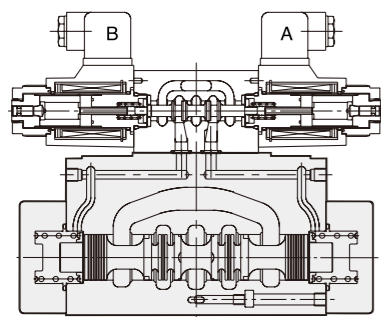
Model: DG07

**SPECIFICATION :**

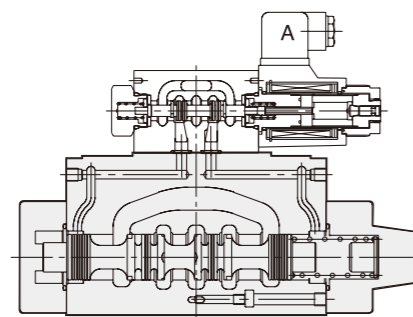
Maximum Flow Rate	300 L/Min (79 GPM)
Maximum Operating Pressure	320 Bar (4500 PSI)
Maximum Permissible Back Pressure	160 Bar (2285 PSI)
Pilot Pressure	12~250 bar
Ambient Temperature Range	-15°C~+50°C
Hydraulic Fluid Temperature	-15°C~+70°C
Viscosity Range	15~400 mm²/S
Hydraulic Oil	ISO VG32, 46, 68
Fluid Cleanliness	25 µm
Maximum Change over Frequency	120 Times/Min
Mounting Pattern	ISO 4401-AD-07-4-A
Approx. Weight (Valve with hydraulic operation)	7.2 kg
Valve Fixing Screws	Metric M6 x 55L (2 pcs) M10 x 50L (4pcs)
	Inch 1/4"~20UNCx2-1/4"L (2pcs) 3/8"~16UNCx2"L (4pcs)
Tightening Torque	12~15 Nm(M6) / 58~72 Nm(M10)

**CROSS SECTION DIAGRAM:**

■ DG07-E1-2C-T-A\*-DN-82

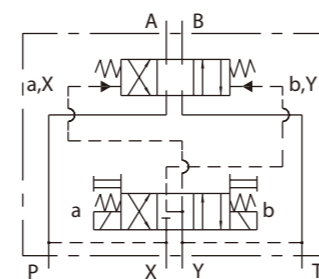


■ DG07-E1-2A-A\*-DN-82



**GRAPHIC SYMBOL:**

■ DG07-E-\*C-T-\*-\*



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**ORDERING CODE :**

D G 07 - E1 - 2 C - E T - A110 - DN - 82 - \* \*  
**1 2 3 4 5 6 7 8 9 10 11 12**

**1 DIRECTIONAL CONTROL VALVE**

**2 MANIFOLD OR SUBPLATE MOUNTING**

**3 NOMINAL VALVE SIZE:**

NG 16, CETOP 7 and ISO 4401-07 (NFPA-D07/DIN 24340)

**4 OPERATOR**

No code: Hydraulic (pilot) operation  
 E1: DSV/DSD electro-hydraulic operation  
 E2: DG electro-hydraulic operation

**5 TYPE OF SPOOL (CENTER CONDITION)**

<b>0</b> A B P T	<b>1</b> A B P T	<b>2</b> A B P T	<b>3</b> A B P T	<b>5</b> A B P T	<b>6</b> A B P T
<b>7</b> A B P T	<b>8</b> A B P T	<b>11</b> A B P T	<b>22</b> A B P T	<b>31</b> A B P T	<b>33</b> A B P T

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

**6 SPRING CRACKING PRESSURE**

- A : Spring offset
- AL: Same with A
- B : Spring centered-single solenoid "A" removed
- BL: Same with B
- C : Spring centered
- N : Without spring with detent (pilot only)

**7 EXTERNAL PILOT PRESSURE**

No code: Internal Pilot  
 E: External Pilot

**8 INTERNAL PILOT DRAIN**

No code: External Drain  
 T: Internal Drain

**9 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

**10 ELECTRICAL OPTIONS:**

DN: DIN 43650 Coils with indicator lights  
 DNO: DIN 43650 Coils without indicator lights  
 WB: Wiring housing with G1/2 thread and indicator lights

**11 DESIGN NUMBER**

82

**12 OPTIONAL INQUIRY**

P: P Check  
 SA: Stroke Adjustment on A Port  
 SB: Stroke Adjustment on B Port  
 SW: Stroke Adjustment on Both A & B Port

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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)	DG07-0C 	DG07-0B 	DG07-0BL 
1 (F)	DG07-1C 	DG07-1B 	DG07-1BL 
2 (E)	DG07-2C 	DG07-2B 	DG07-2BL 
3 (L)	DG07-3C 	DG07-3B 	DG07-3BL 
5	DG07-5C 	DG07-5B 	DG07-5BL 
6 (J)	DG07-6C 	DG07-6B 	DG07-6BL 
7 (M)	DG07-7C 	DG07-7B 	DG07-7BL 
8 (G)	DG07-8C 	DG07-8B 	DG07-8BL 
11 (P)	DG07-11C 	DG07-11B 	DG07-11BL 
31 (U)	DG07-31C 	DG07-31B 	DG07-31BL 
33 (W)	DG07-33C 	DG07-33B 	DG07-33BL 

\*( ) : Rexroth Model

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SPOOL TYPES:

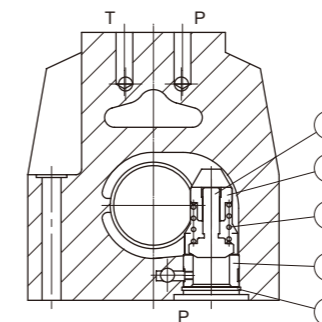
Position type during transition	Double solenoid valves, spring centered -N-	Single solenoid valves, solenoid at port A end -A-	Single solenoid valves, solenoid at port B end -AL-
0 (H)		DG07-0A 	DG07-0AL 
2 (E)	DG07-2N 	DG07-2A 	DG07-2AL 
6 (J)		DG07-6A 	DG07-6AL 
7 (M)		DG07-7A 	DG07-7AL 
22 (A)		DG07-22A 	DG07-22AL 

\*( ) : Rexroth Model

**P CHECK**

■ DG07-E\*-\*-\*-\*82-P

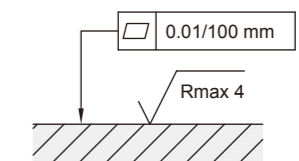
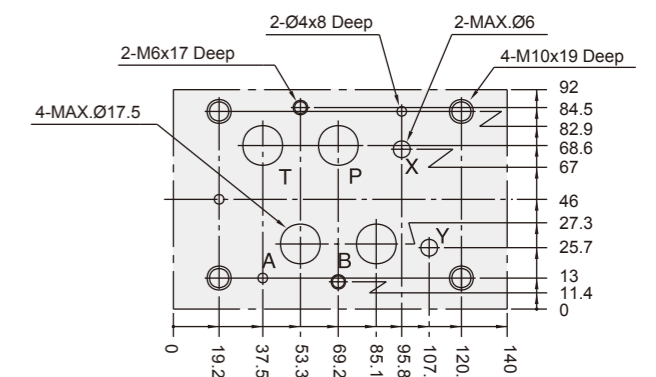
1. Seat
2. Poppet
3. Spring Retainer
4. Spring
5. C-retaining ring



**INSTALLATION DIMENSIONS:**

(Machined valve mounting face with position of ports)

■ Mounting Surface: ISO 4401-AD-07-4-A



Required surface finish of mating piece

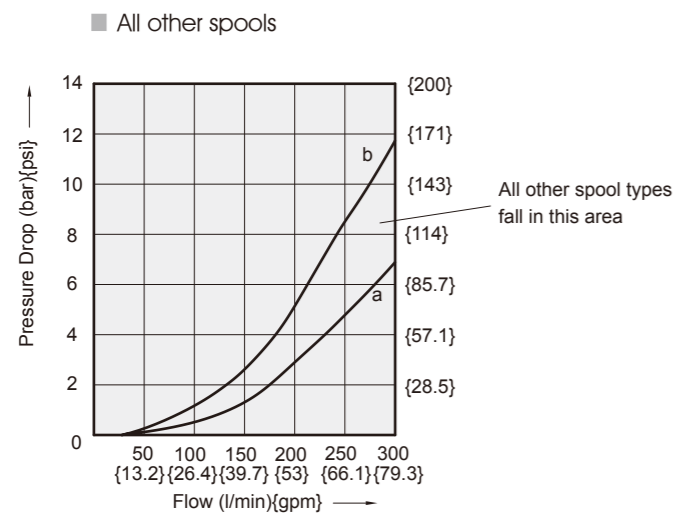
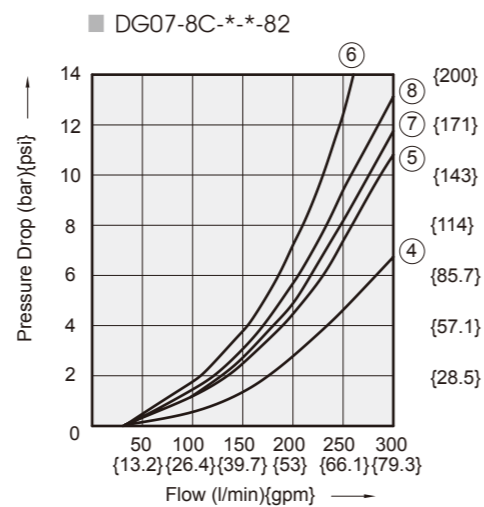
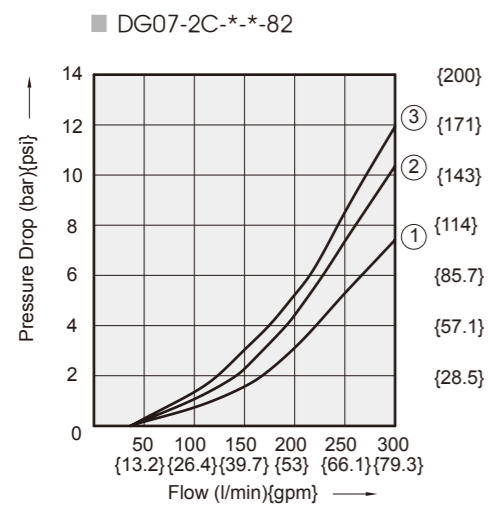
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PERFORMANCE FIGURES & CURVES:

Pressure Drop Curve Reference Chart

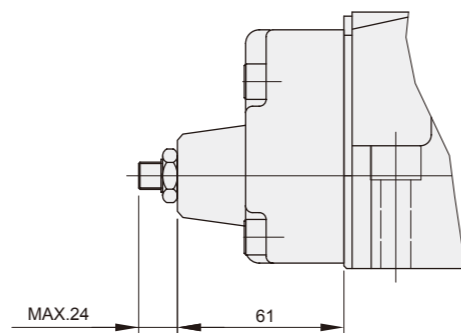
Viscosity of Hydraulic Fluid: 41 mm<sup>2</sup>/s

Spool Type	Pressure Drop Characteristics				
	P→A	P→B	A→T	B→T	P→T
0C	a-b	a-b	a-b	a-b	a-b
1C	a-b	a-b	a-b	a-b	a-b
2C	1	1	2	3	-
3C	a-b	a-b	a-b	a-b	a-b
6C	a-b	a-b	a-b	a-b	a-b
7C	a-b	a-b	a-b	a-b	a-b
8C	4	5	7	8	6
11C	a-b	a-b	a-b	a-b	a-b
31C	a-b	a-b	a-b	a-b	a-b
33C	a-b	a-b	a-b	a-b	a-b
0A	a-b	a-b	a-b	a-b	a-b
2A	1	1	2	3	-



STROKE ADJUSTMENT:

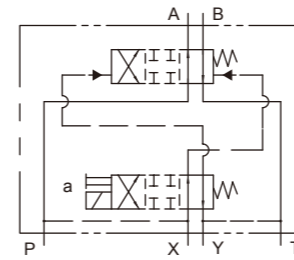
■ DG07-E-\*-82-S



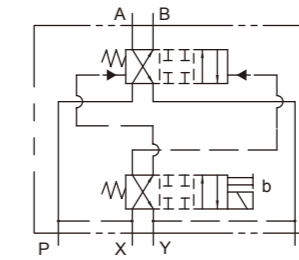
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HYDRAULIC CONFIGURATION:

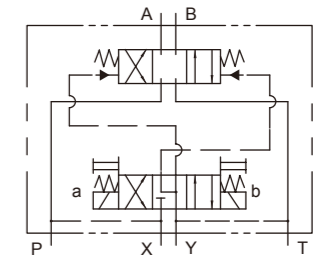
■ DG07-E-2A-T-\*-\*\* (\*A)



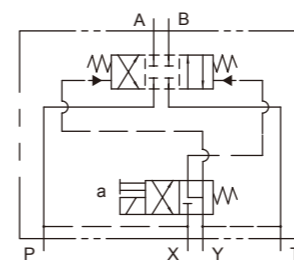
■ DG07-E-2AL-T-\*-\*\* (\*AL)



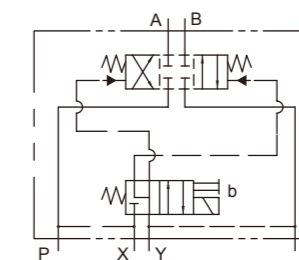
■ DG07-E-\*C-T-\*-\*\*



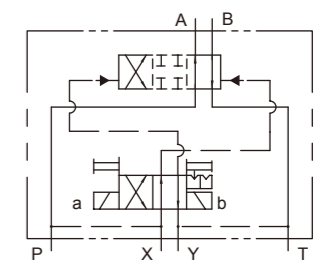
■ DG07-E-2B-T-\*-\*\* (\*B)



■ DG07-E-2BL-T-\*-\*\* (\*BL)

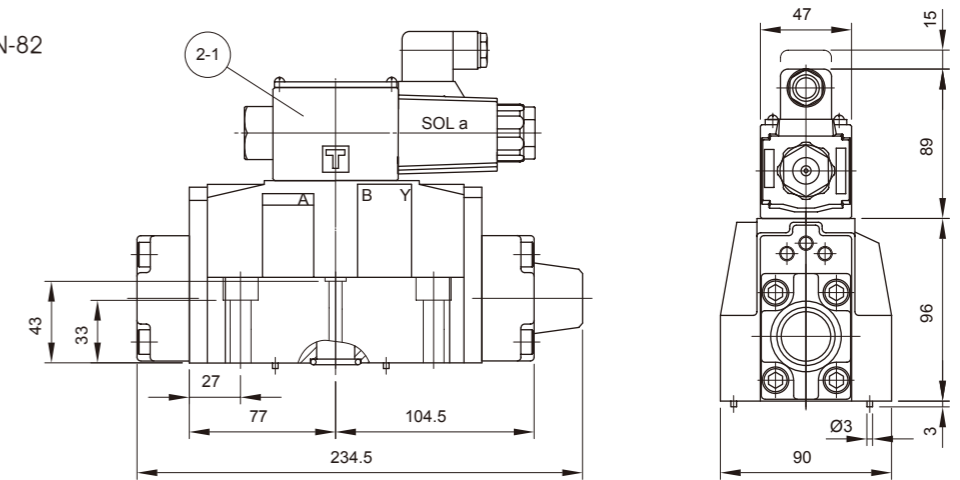


■ DG07-E-2N-T-\*-\*\* (\*N)

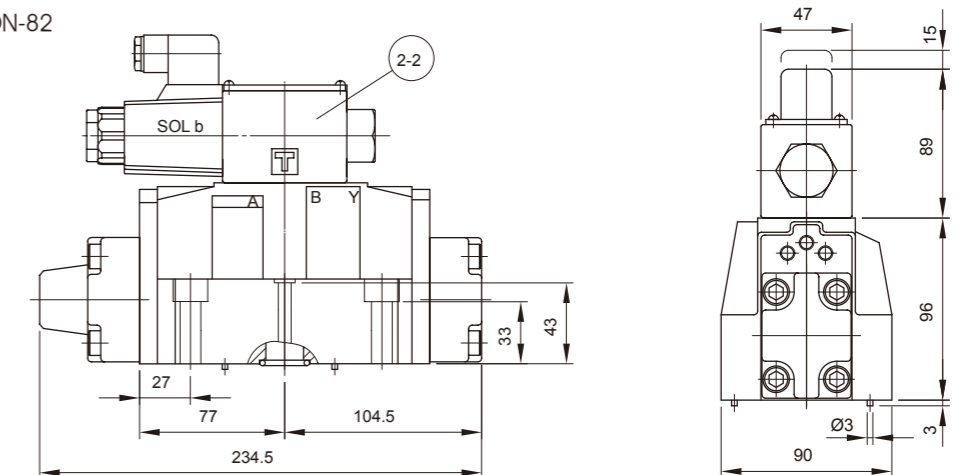


DIMENSIONS:

■ DG07-E1- \*A-A\*-DN-82 \*B



■ DG07-E1- \*AL-A\*-DN-82 \*BL



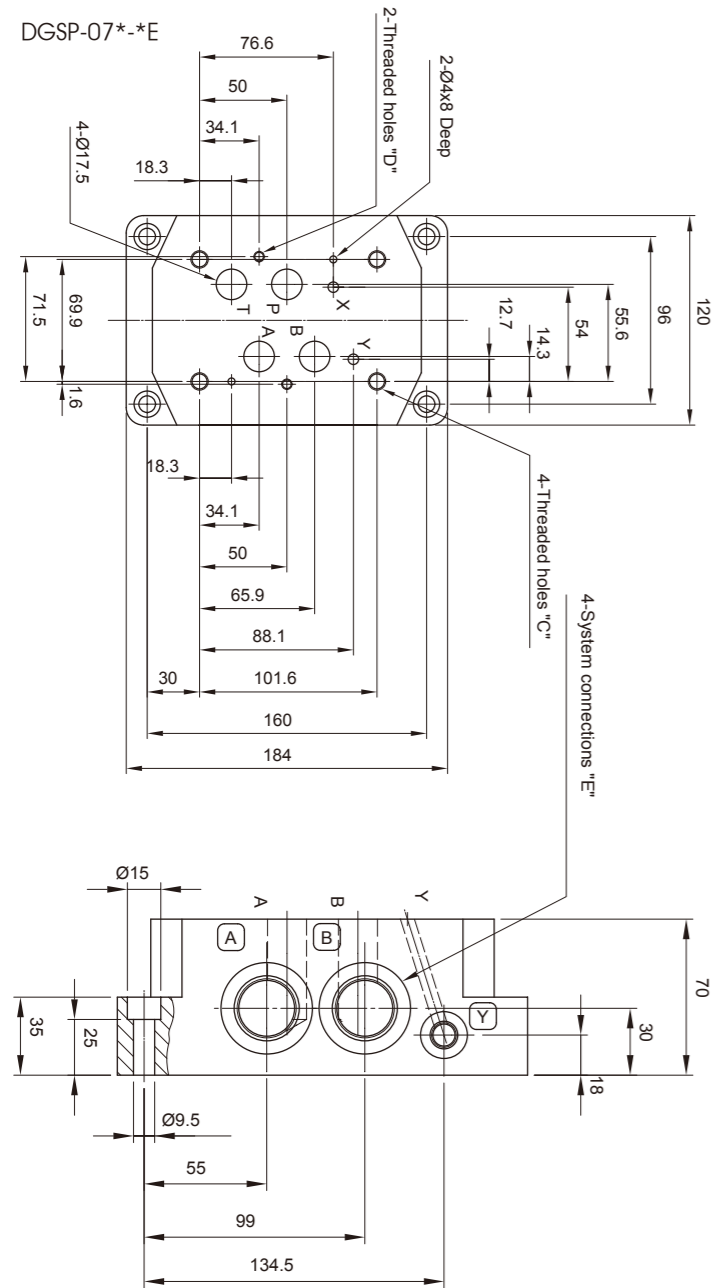


# SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE DG07 SIZE 16

## SUBPLATE DIMENSIONS:

Side Connection

DGSP-07\*-E

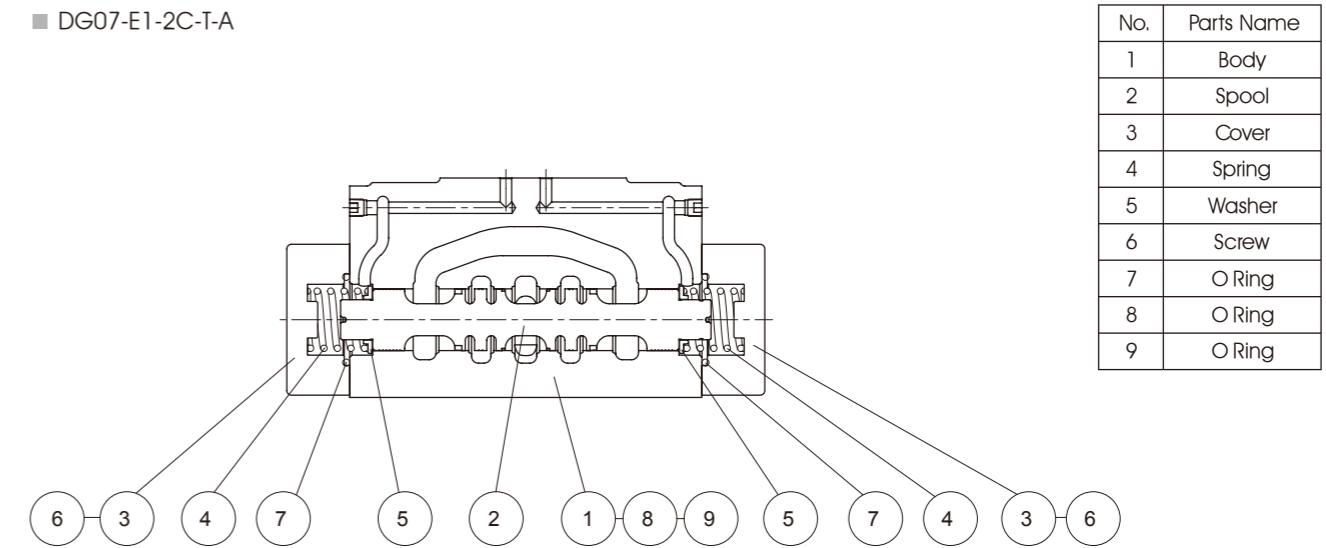


Model	C	D	E	F	Weight
DGSP-07-12E			3/4" Rc	1/4" Rc	3.8 kgs
DGSP-07-16E	M10 x 19 Deep (Min)	M6 x 14 Deep (Min)	1" Rc	1/4" Rc	3.8 kgs
DGSP-07G-12E			3/4" BSP	1/4" BSP	3.8 kgs
DGSP-07G-16E			1" BSP	1/4" BSP	3.8 kgs
DGSP-07N-12E			3/4" NPT	1/4" NPT	3.8 kgs
DGSP-07N-16E	3/8"-16UNC-2B Thd. x 3/4" Deep	1/4"-20UNC-2B Thd. x 9/16" Deep	1" NPT	1/4" NPT	3.8 kgs
DGSP-07S-12E			3/4" SAE	1/4" SAE	3.8 kgs
DGSP-07S-16E			1" SAE	1/4" SAE	3.8 kgs

# SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE DG07 SIZE 16

## CROSS SECTION DRAWING

■ DG07-E1-2C-T-A



Parts No.	Parts Name	Specification	Port	Q'ty
7	O Ring	G35 N90		2
8	O Ring	AS568-Ø3 N90	X, Y	2
9	O Ring	AS568-118 N90	A, B, P, T	4