

**SOLENOID CONTROLLED PILOT  
OPERATED DIRECTIONAL VALVE DG08 SIZE 22**

A  
DG08 SIZE 22

**FEATURES :**

- Highest performance in NG 22
- 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: DG08

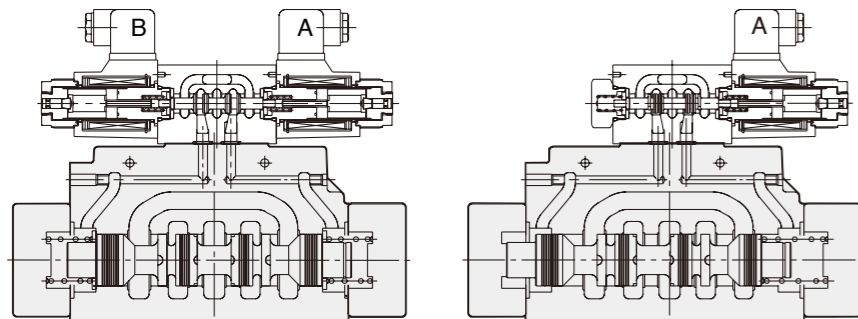
**SPECIFICATION :**

Maximum Flow Rate	450 L/Min (119 GPM)	
Maximum Operating Pressure	320 Bar (4500 PSI)	
Maximum Permissible Back Pressure	160 Bar (2285 PSI)	
Pilot Pressure	11~210 bar	
Ambient Temperature Range	-15°C~+50°C	
Hydraulic Fluid Temperature	-15°C~+70°C	
Viscosity Range	15~400 mm <sup>2</sup> /S	
Hydraulic Oil	ISO VG32, 46, 68	
Fluid Cleanliness	25 μm	
Maximum Change over Frequency	120 Times/Min	
Mounting Pattern	ISO 4401-AE-08-4-A	
Approx. Weight (Valve with hydraulic operation)	12.5 kg	
Valve Fixing Screws	Metric	M12 x 60L (6 pcs)
	Inch	1/2"~1.3UNCx2-1/4"L (6 pcs)
Tightening Torque	100~122.5 Nm (M10)	

**CROSS SECTION DIAGRAM:**

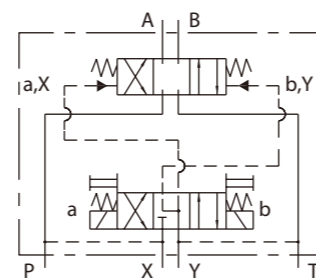
■ DG08-E1-2C-T-A\*-DN-82

■ DG08-E1-2A-T-A\*-DN-82



**GRAPHIC SYMBOL:**

■ DG08-E-\*C-T-\*-\*-\*



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**ORDERING CODE :**

D G 08 - 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 22, CETOP 8 and ISO 4401-08 (NFPA-D08/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

**SOLENOID CONTROLLED PILOT  
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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)	DG08-0C 	DG08-0B 	DG08-0BL 
1 (F)	DG08-1C 	DG08-1B 	DG08-1BL 
2 (E)	DG08-2C 	DG08-2B 	DG08-2BL 
3 (L)	DG08-3C 	DG08-3B 	DG08-3BL 
5	DG08-5C 	DG08-5B 	DG08-5BL 
6 (J)	DG08-6C 	DG08-6B 	DG08-6BL 
7 (M)	DG08-7C 	DG08-7B 	DG08-7BL 
8 (G)	DG08-8C 	DG08-8B 	DG08-8BL 
11 (P)	DG08-11C 	DG08-11B 	DG08-11BL 
31 (U)	DG08-31C 	DG08-31B 	DG08-31BL 
33 (W)	DG08-33C 	DG08-33B 	DG08-33BL 

\*( ) : Rexroth Model

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SPOOL TYPES:

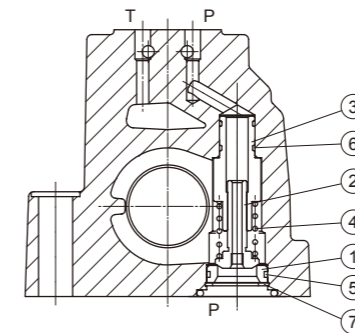
Position type during transition	Single solenoid valves, solenoid at port A end -A-	Single solenoid valves, solenoid at port B end -AL-
0 (H)	DG08-0A 	DG08-0AL 
2 (E)	DG08-2A 	DG08-2AL 
6 (J)	DG08-6A 	DG08-6AL 
7 (M)	DG08-7A 	DG08-7AL 
22 (A)	DG08-22A 	DG08-22AL 

\*( ) : Rexroth Model

**P CHECK**

■ DG08-E-\*. \*-82-P

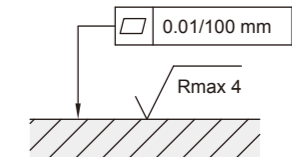
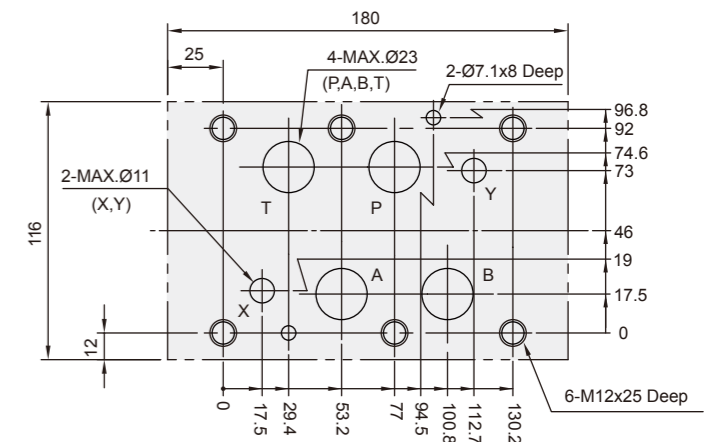
- 1.Seat
- 2.Poppet
- 3.Spring Retainer
- 4.Spring
- 5.O-Ring
- 6.O-Ring
- 7.C-retaining ring



**INSTALLATION DIMENSIONS:**

(Machined valve mounting face with position of ports)

■ Mounting Surface: ISO 4401-AE-08-4-A



Required surface finish of mating piece when fitting the valve without subplate

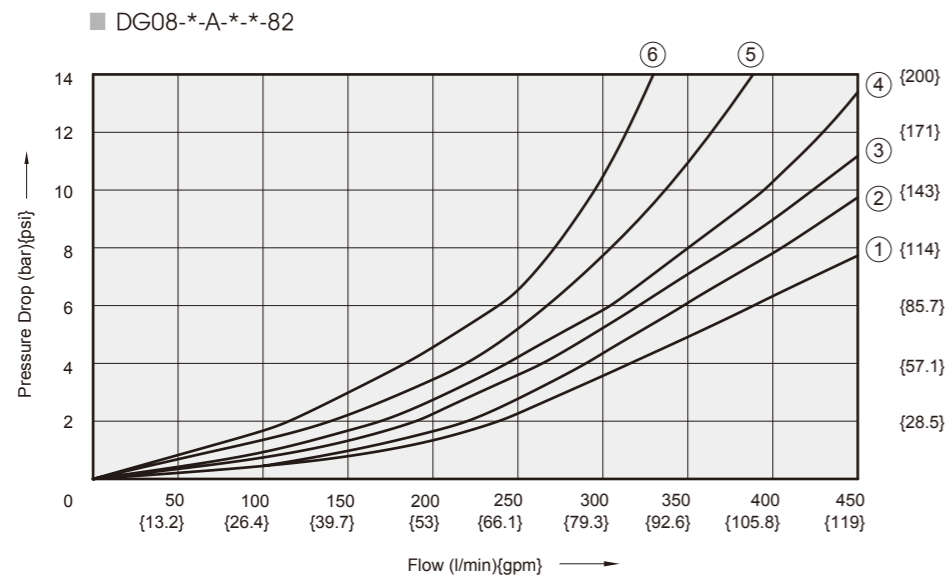
# SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE DG08 SIZE 22

## PERFORMANCE FIGURES & CURVES:

Pressure Drop Curve Reference Chart

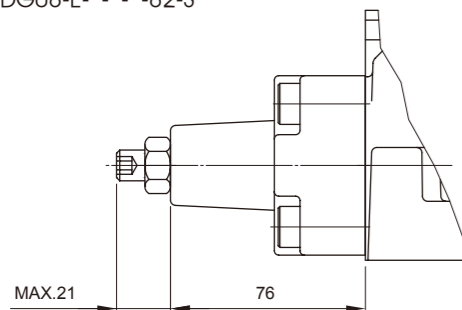
Viscosity of Hydraulic Fluid: 41 mm<sup>2</sup>/s

Spool Type	Pressure Drop Characteristics				
	P→A	P→B	A→T	B→T	P→T
0C (H)	2	2	1	3	2
1C (F)	1	2	1	2	4
2C (E)	2	2	1	4	-
3C (L)	2	2	1	2	-
6C (J)	2	2	1	3	-
7C (M)	2	2	1	4	-
8C (G)	2	2	2	4	6
11C (P)	2	2	1	4	6
31C (U)	2	2	1	4	-
33C (W)	2	2	1	3	-
0A (H)	2	2	1	3	-
2A (E)	2	2	1	4	-



## STROKE ADJUSTMENT:

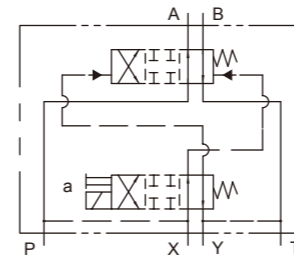
DG08-E-\*-82-S



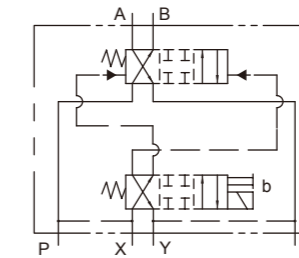
# SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE DG08 SIZE 22

## HYDRAULIC CONFIGURATION:

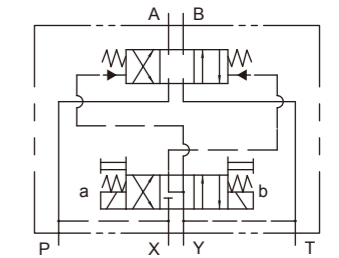
DG08-E-2A-T-\*-\*\* (\*A)



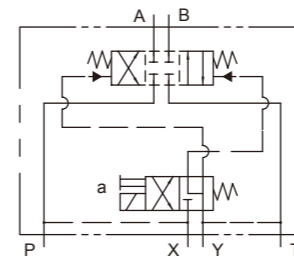
DG08-E-2AL-T-\*-\*\* (\*AL)



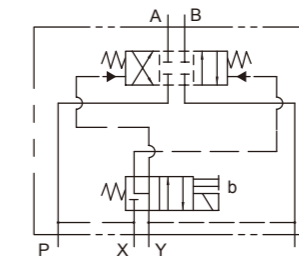
DG08-E-\*C-T-\*-\*\*



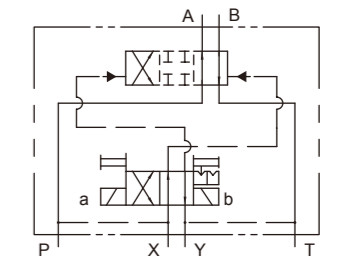
DG08-E-2B-T-\*-\*\* (\*B)



DG08-E-2BL-T-\*-\*\* (\*BL)

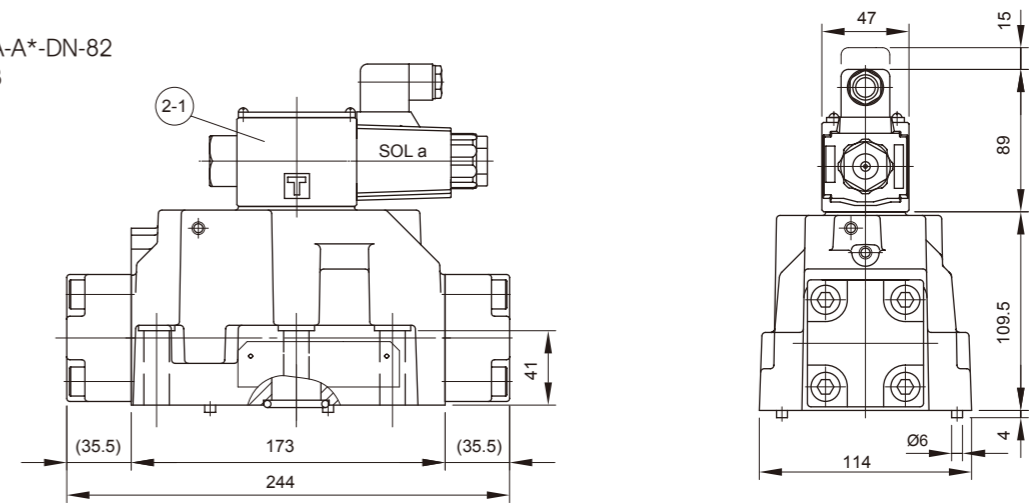


DG08-E-\*N-T-\*-\*\*

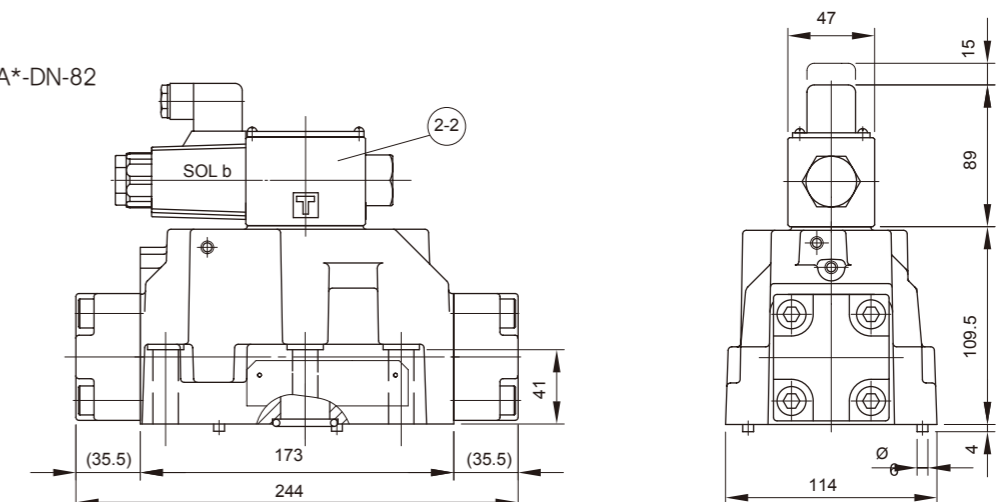


## DIMENSIONS:

DG08-E1- \*A-A\*-DN-82 \*B



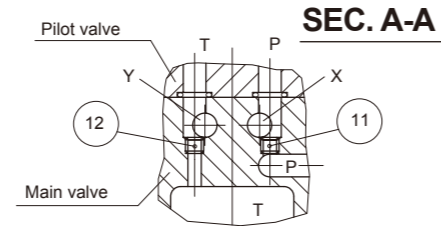
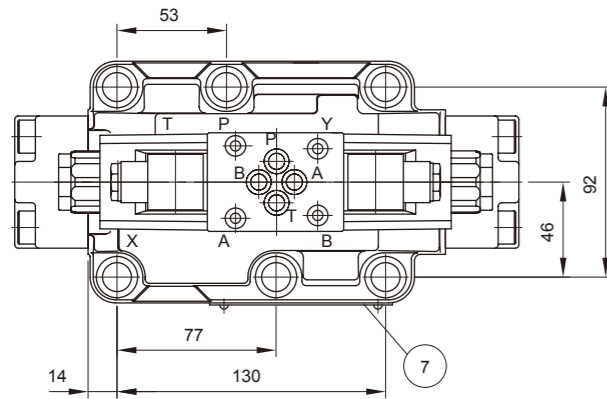
DG08-E1- \*AL-A\*-DN-82 \*BL



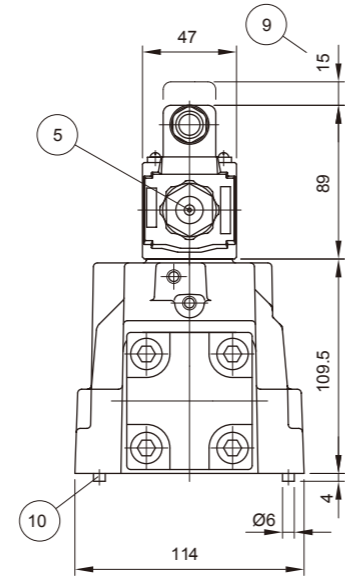
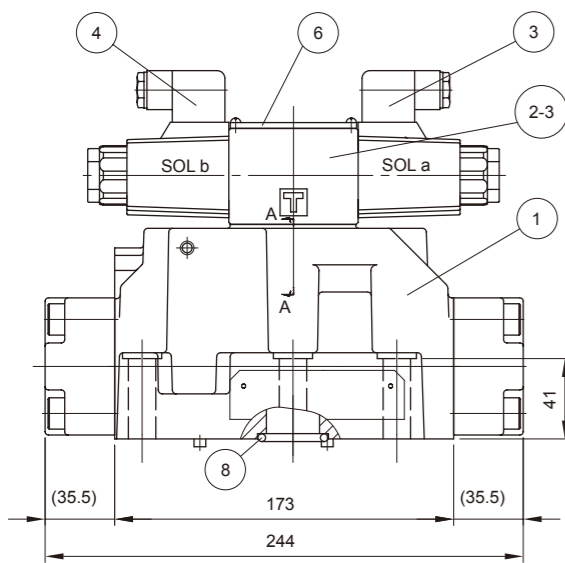
# SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE DG08 SIZE 22

## DIMENSIONS:

■ DG08-E1-\*C-A\*-DN-82



Pilot oil feed(plug: M6x8L)  
External: 11 plugged  
Internal: 11 open  
Pilot oil drain(plug: M6x8L)  
External: 12 plugged  
Internal: 12 open



- 1: Main valve
- 2: Pilot valve
  - 2-1: Pilot valve DSV/DSD-G02-2A-\* (1 solenoid) for main valves with spools \*A, \*B (3 position valve with solenoid on side a)
  - 2-2: Pilot valve DSV/DSD-G02-2AL-\* (1 solenoid) for main valves with spools \*AL, \*BL (3 position valve with solenoid on side b)
  - 2-3: Pilot valve DSV/DSD-G02-6C-\* (2 solenoid) for main valves with 3 positions

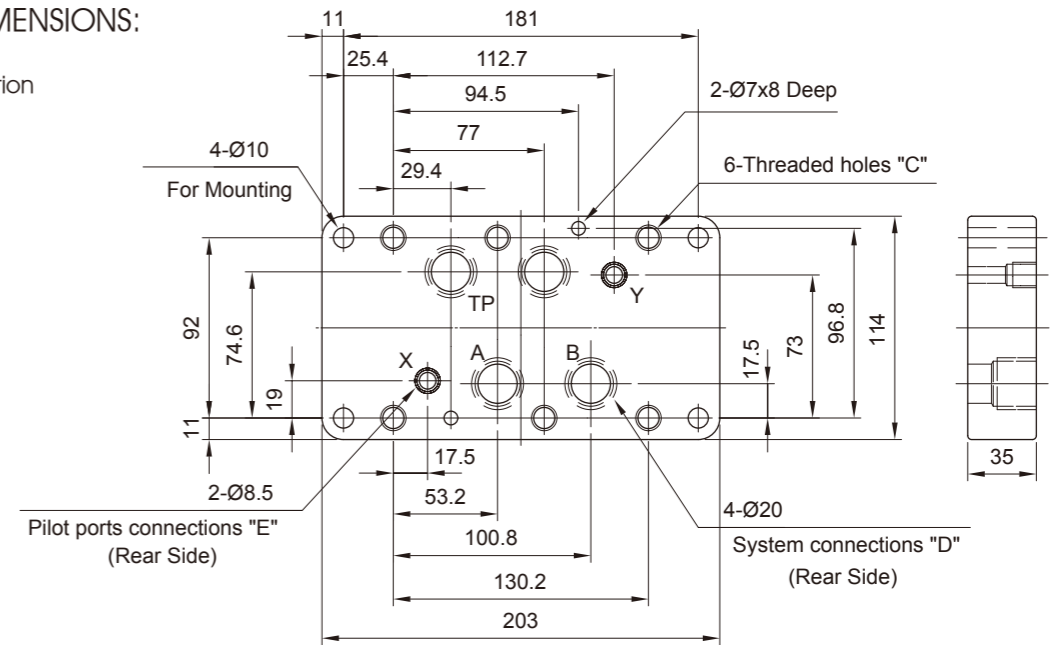
- 3: Solenoid a
- 4: Solenoid b
- 5: Push pin for manual operation
- 6: Nameplate for pilot valve
- 7: Nameplate for whole valve
- 8: O-ring:
  - Ports A,B,P,T: AS568-215 (NBR,Hs90);
  - Ports X,Y: AS568-210 (NBR,Hs90)
- 9: Space required to remove plug
- 10: Locating pin

# SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE DG08 SIZE 22

## SUBPLATE DIMENSIONS:

Bottom Connection

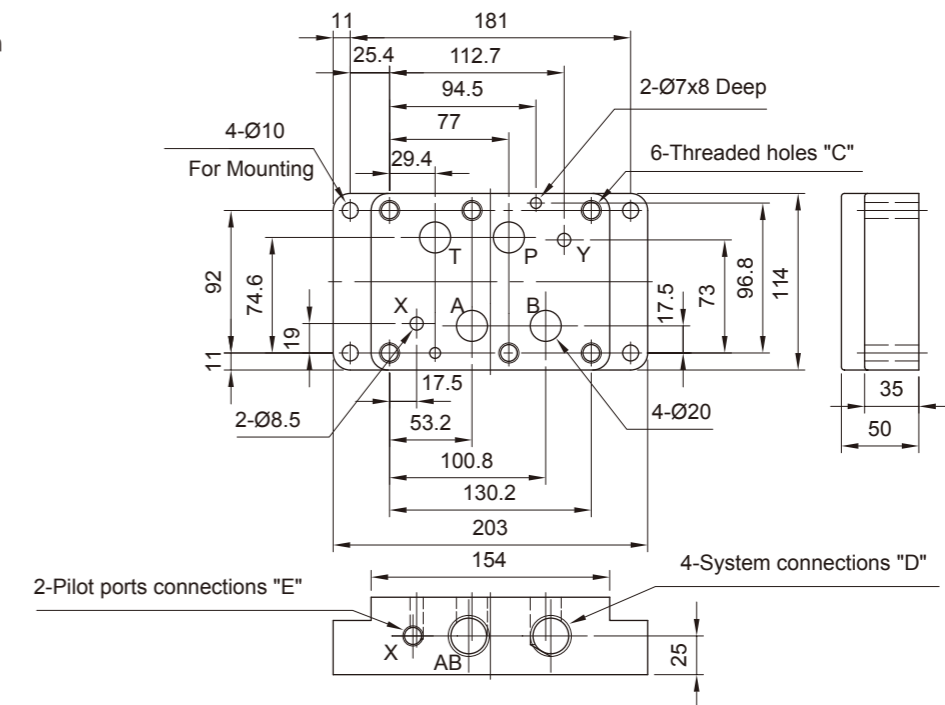
■ DGSP-08\*-\*



Model	C	D	E	Weight	Model	C	D	E	Weight
DGSP-08-12		3/4" Rc	1/4" RC	4.8 kgs	DGSP-08N-12		3/4" NPT	1/4" RC	4.8 kgs
DGSP-08-16	M12x25 Deep (min)	1" Rc	1/4" RC	4.8 kgs	DGSP-08N-16	1/2"~13UNC-2B Thd. x 1" Deep Full Thread Depth	1" NPT	1/4" RC	4.8 kgs
DGSP-08G-12	Full Thread Depth	3/4" BSP	1/4" BSP	4.8 kgs	DGSP-08S-12		3/4" SAE	1/4" BSP	4.8 kgs
DGSP-08G-16		1" BSP	1/4" BSP	4.8 kgs	DGSP-08S-16		1" SAE	1/4" BSP	4.8 kgs

Side Connection

■ DGSP-08\*-\*E



Model	C	D	E	Weight	Model	C	D	E	Weight
DGSP-08-12E		3/4" Rc	1/4" RC	6.4 kgs	DGSP-08N-12E		3/4" NPT	1/4" RC	6.4 kgs
DGSP-08-16E	M12x25 Deep (min)	1" Rc	1/4" RC	6.4 kgs	DGSP-08N-16E	1/2"~13UNC-2B Thd. x 1" Deep Full Thread Depth	1" NPT	1/4" RC	6.4 kgs
DGSP-08G-12E	Full Thread Depth	3/4" BSP	1/4" BSP	6.4 kgs	DGSP-08S-12E		3/4" SAE	1/4" BSP	6.4 kgs
DGSP-08G-16E		1" BSP	1/4" BSP	6.4 kgs	DGSP-08S-16E		1" SAE	1/4" BSP	6.4 kgs

