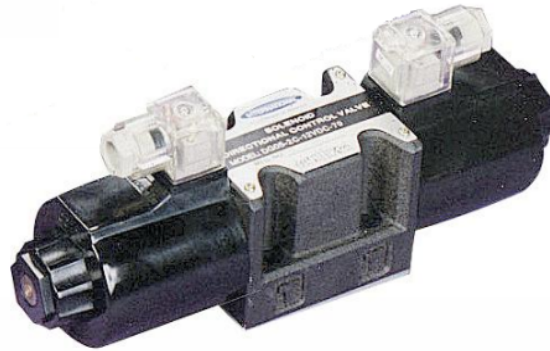


IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05



FEATURES :

- Highest performance in NG 10
- 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

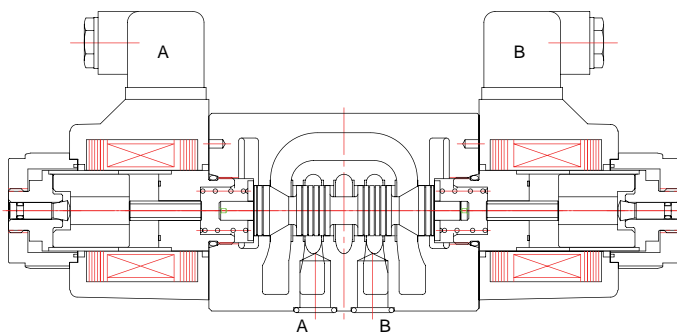


SPECIFICATION :

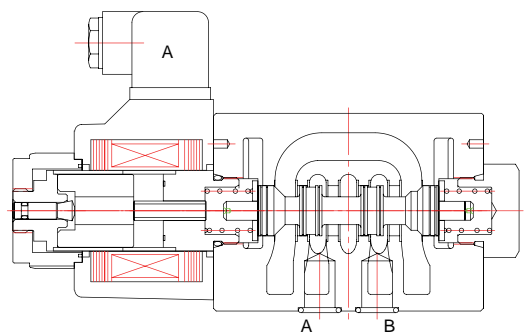
Maximum Flow rate		42 GPM (160 L/Min)
Maximum Operating Pressure		3571 PSI (250 Bar)
Maximum Permissible Back Pressure		2285 PSI (160 Bar)
Ambient Temperature		5°F~122°F(-15°C~50°C)
Hydraulic Fluid Temperature		5°F~158°F(-15°C~70°C)
Viscosity range		15~400 mm ² /S
Hydraulic Oil		ISO VG 32,46,68
Fluid Cleanliness		NAS Class 9 max
Degree of Protection to DiN40050 & iEP		IP 65
Maximum Change over Frequency		180 Times/min (AC/DC)
		120 Times/Min (RF)
Mounting Pattern		ISO 4401-aB-05-4-a
Approx. Weight (lbs)	Single solenoid (AC/DC)	8 / 10
	Double solenoid (AC/DC)	10 / 13.4
Valve Fixing Screws	metric	M6*35l (4pcs)
	inch	1/4"~20UNCx1-3/8"l*4pcs
Tightening Torque		106-132 in/lbs-

CROSS SECTION DIAGRAM:

■ DG05-2C-A*-72 DN



■ DG05-2A-A*-72 DN



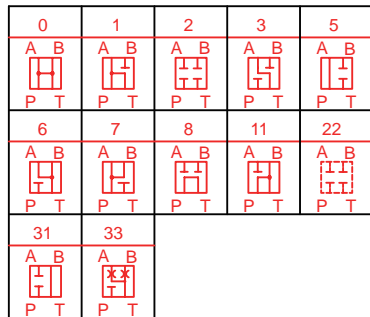
IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-5

ORDERING CODE :

DG 05 – 2C-115VAC- 72 ND - *



- 1** DIRECTIONAL CONTROL VALVE
- 2** MANIFOLD OR SUBPLATE MOUNTING
- 3** NOMINAL VALVE SIZE:
NG 10, CETOP 5 and ISO 4401-05
- 4** TYPE OF SPOOL (CENTER CONDITION)



- 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 AB)

5 SPRING ARRANGEMENT

- 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
- F: Spring offset-shift to center-single solenoid
- N: Without spring with detent

6 ELECTRIC POWER SOURCE INDICATION

- 115VAC: AC110V, 50Hz/AC120V, 60Hz
- R1: AC110V,50/60Hz; rectifier built-in type
- 220VAC: AC220V, 50Hz/AC240V, 60Hz;
- R2: AC220V, 50/60Hz; rectifier built-in type
- 12VDC: DC12V
- 24VDC: DC24V

7 DESIGN NUMBER:

72

8 ELECTRICAL OPTIONS

- WB: Wiring Housing with 1/2" Thread c/w Indicator Lights
- DN: DIN 43650 COIL c/w Indicator Lights

9 OPTIONAL INQUIRY

IS: Surge Killer

IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-5

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	DG05-0C 	DG05-0B 	DG05-0BL
1	DG05-1C 	DG05-1B 	DG05-1BL
2	DG05-2C 	DG05-2B 	DG05-2BL
	/		DG05-2FL
3	DG05-3C 	DG05-3B 	DG05-3BL
5	DG05-5C 	DG05-5B 	DG05-5BL
6	DG05-6C 	DG05-6B 	DG05-6BL
7	DG05-7C 	DG05-7B 	DG05-7BL
8	DG05-8C 	DG05-8B 	DG05-8BL
11	DG05-11C 	DG05-11B 	DG05-11BL
31	DG05-31C 	DG05-31B 	DG05-31BL
33	DG05-33C 	DG05-33B 	DG05-33BL

IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

SPOOL TYPES:

Position type during transition	Double solenoid valves, two-position (detented) -N-	Single solenoid valves, solenoid at port A end -A-	Single solenoid valves, solenoid at port B end -AL-
0		DG05-0A 	DG05-0AL
2	DG05-2N 	DG05-2A 	DG05-2AL
6		DG05-6A 	DG05-6AL
7		DG05-7A 	DG05-7AL
22		DG05-22A 	DG05-22AL

FEATURES OF ELECTRO-MANGNETIC COIL :

Solenoid Classification	Power Source	Voltage (V)		Inrush Current (A)	Holding Current (A)	Holding Pwert (W)	Permissible Voltage (%)	Insulation Grade	Coil Insulation Class	Insulation
AC	A1	110	50	6.2	0.63		+10,-15	B	H (180°C)	>50
		120	60	6.0	0.54		+10,-15			
	A2	220	50	3.1	0.32		+10,-15			
		240	60	3.0	0.27		+10,-15			
DC	D1	12	-	-	3.17	38	+10,-10	B	H (180°C)	
	D2	24	-	-	1.58	38				
RF	R1	AC110V, 50/60 Hz		-	0.42	41	+10,-10	B	H (180°C)	
		DC99V								
	R2	AC220V, 50/60 Hz		-	0.21	41	+10,-10			
		DC198V								

IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE:NG-10/CETOP-05

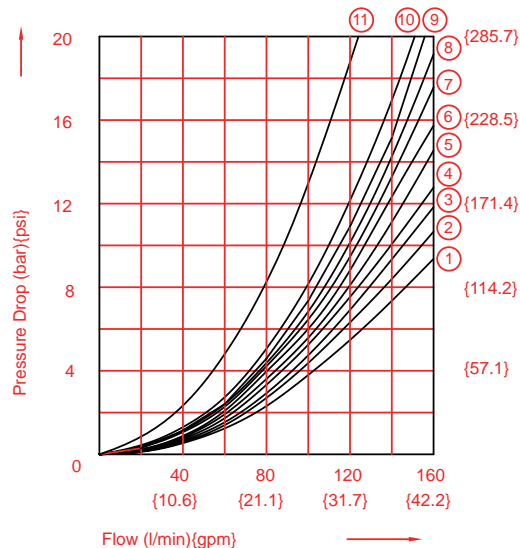
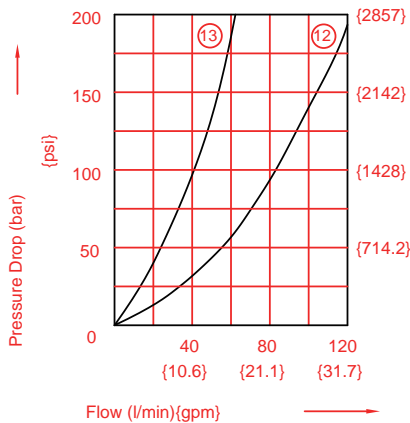
PERFORMANCE FIGURES & CURVES:
Pressure Drop Curve Reference Chart

Viscosity of Hydraulic

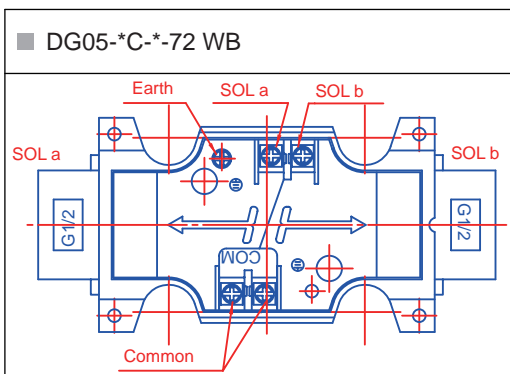
Spool Type	C,B,BL								
	Control Position				Neutral Position				
	P→A	B→T	P→B	A→T	P→T	A→T	B→T	P→A	P→B
0	7	10	7	10	8	8	8	6	6
1	6	3	9	11	10	2	-	6	-
2	5	3	5	3	-	-	-	-	-
3	5	3	5	9	-	4	-	-	-
6	5	9	5	9	-	4	4	-	-
7	6	3	6	3	-	-	-	7	7
8	1	10	1	10	11	-	-	-	-
11	9	11	6	3	10	-	2	-	6
31	5	9	5	3	-	-	4	-	-
33	5	3	5	3	-	13	13	-	-

Spool Type	A,AL			
	Control Position			
	P→A	B→T	P→B	A→T
0	6	9	6	6
2	6	3	6	3

Spool Type	N			
	Control Position			
	P→A	B→T	P→B	A→T
2	7	3	7	3



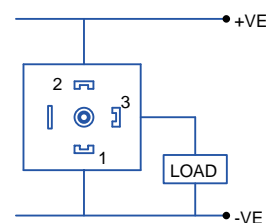
WIRING:



Note:

1. Com terminal is fitted in double solenoid valve for easiness of wiring.
2. use an ground 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.

■ DG05-*-*72 DN



IFF DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

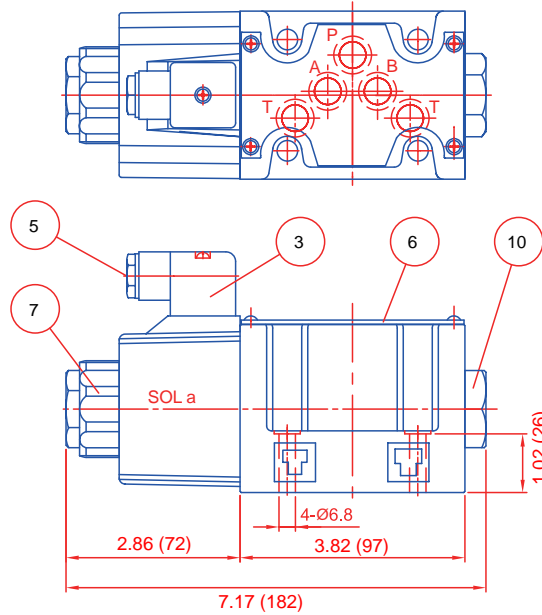
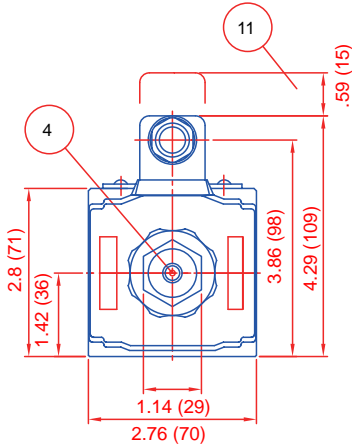
DIMENSIONS:

AC solenoid (DN Type)

■ DG05 - A - AC* 72 DN*

**B

*F

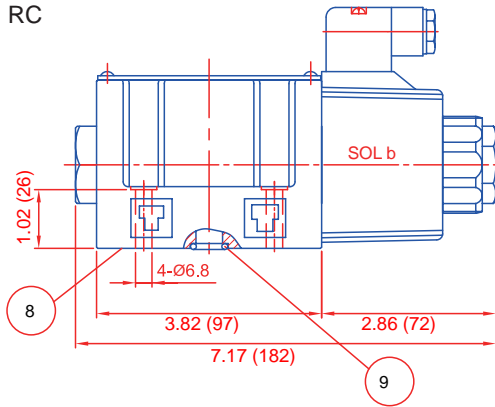


Dimensions: inches (mm)

■ DG05-*AL-AC* 72DN

*BL

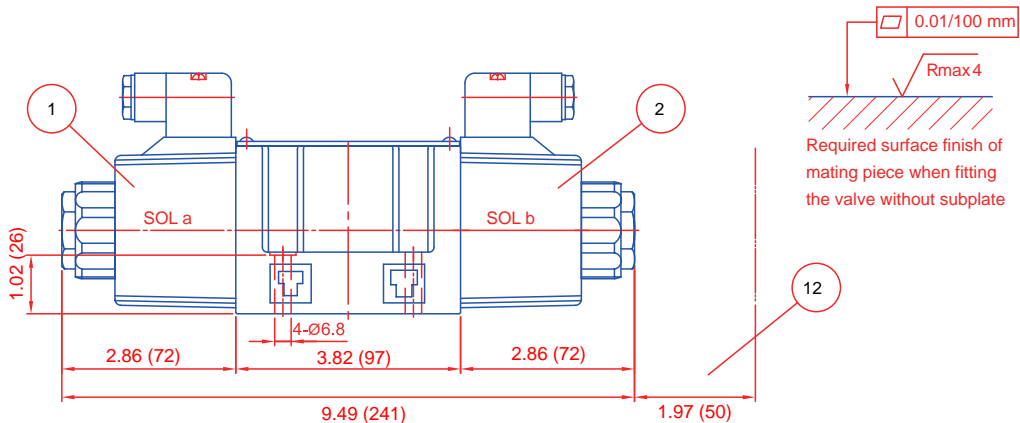
RC



- 1: Solenoid a, color of plug: grey
- 2: Solenoid b, color of plug: black
- 3: Angled plug to DIN 43650
- 4: Push pin for manual operation
- 5: Lead wire take-out (Cable diameter $\varnothing 8-10$ mm)
- 6: Nameplate
- 7: Lock nut with torque: not exceeding 10.5 N.m
- 8: Connections to DiN 24340 from a10; valve fixing screws M6*35 DiN 912-1.9 tightening torque 12~15 Nm
- 9: O-ring aS568-014 (Hs90)
- 10: Plug for valves with 1 solenoid
- 11: Space required to remove plug
- 12: Coil removable length

■ DG05-*C- AC* 72DN

*N



Dimensions: inches (mm)

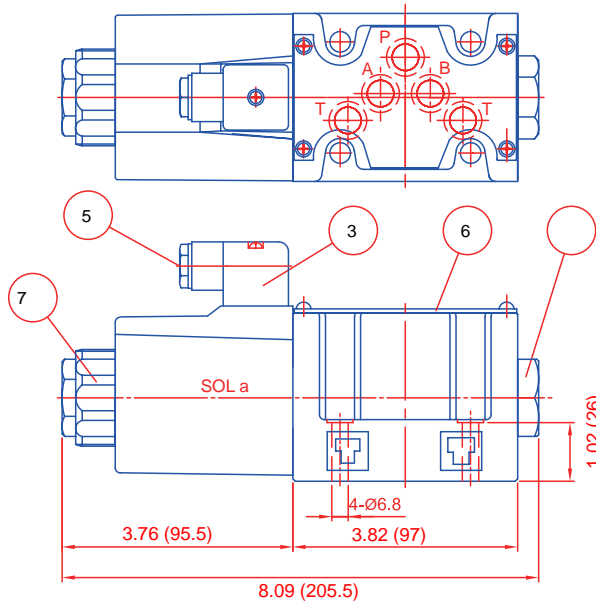
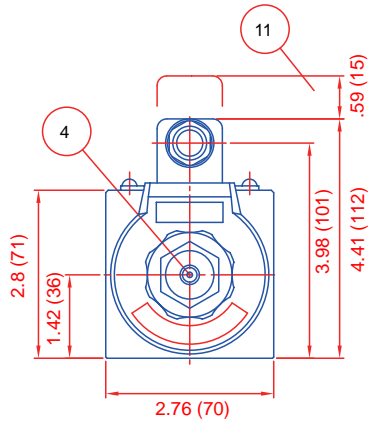
IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

DIMENSIONS: DC solenoid (DN Type)

■ DG05-*A DC*-72 DN

*B

*F

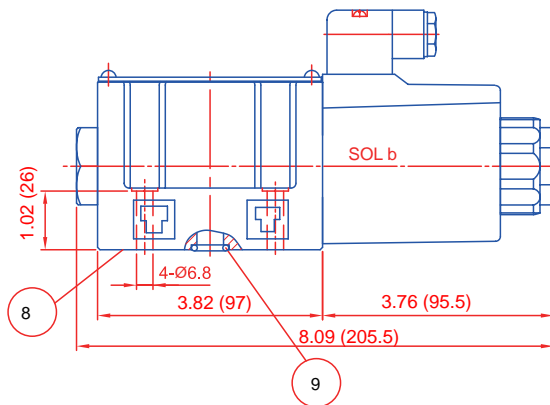


Dimensions: inches (mm)

■ DG05-*AL-DC*-72 DN

*B

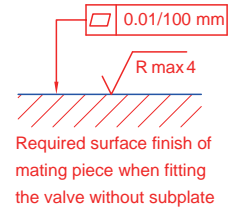
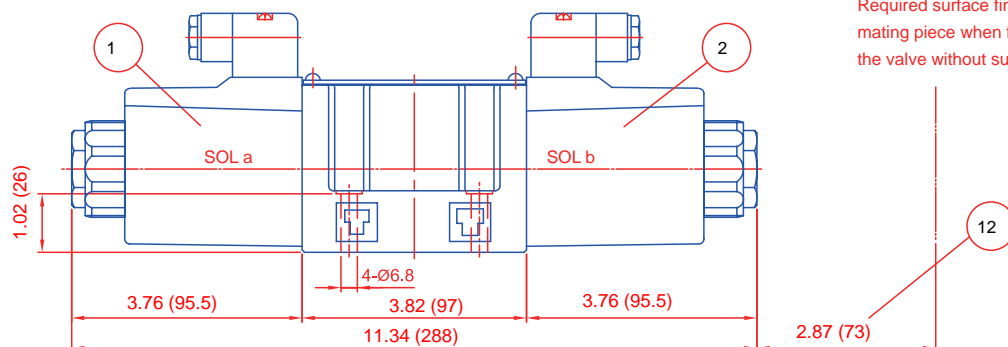
*F



- 1: Solenoid a, color of plug: grey
- 2: Solenoid b, color of plug: black
- 3: Angled plug to DIN 43650
- 4: Push pin for manual operation
- 5: Lead wire take-out (Cable diameter $\varnothing 8-10\text{mm}$)
- 6: Nameplate
- 7: Lock nut with torque: not exceeding 10.5 N.m
- 8: Connections to DiN 24340 from a10; valve fixing screws m6*35 DiN 912-10.9 tightening torque 12~15 Nm
- 9: O-ring aS568-014 (Hs90)
- 10: Plug for valves with 1 solenoid
- 11: Space required to remove plug
- 12: Coil removable length

■ DG05-*C-DC*-72DN

*N



Dimensions: inches (mm)

IFFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

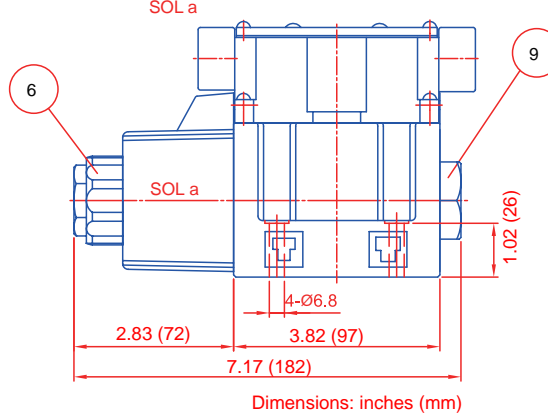
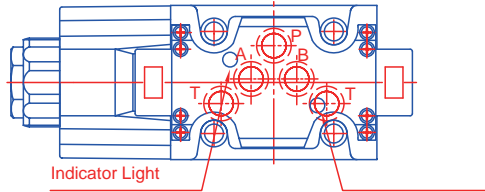
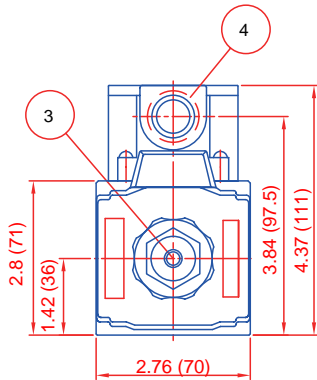
DIMENSIONS:

AC solenoid (WB Type)

■ DG05-*A AC*72WB

* B

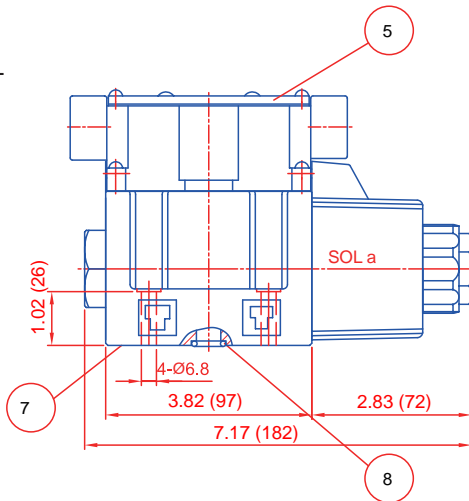
*F



■ DG05-*AL AC*72WB

* BL

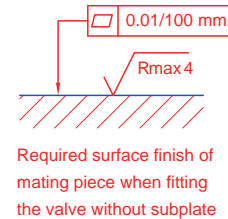
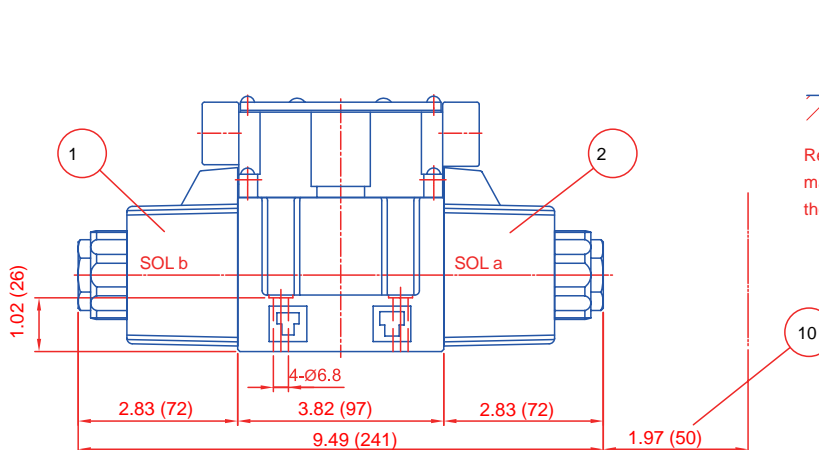
*FL



- 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: not exceeding 10.5 N.m
- 7: Connections to DIN 24340 from a10; valve fixing screws m6*35 DIN 912-10.9 tightening torque 12~15 Nm
- 8: O-ring aS568-014 (Hs90)
- 9: Plug for valves with 1 solenoid
- 10: Coil removable length

■ DG05-*C-AC*72WB

*N



Dimensions: inches (mm)

IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

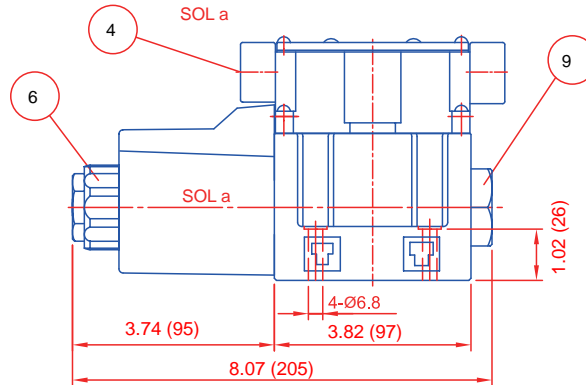
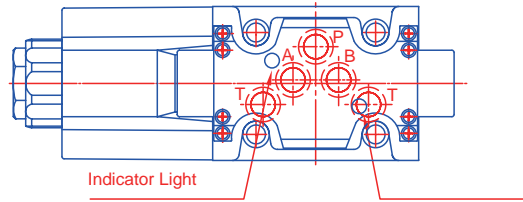
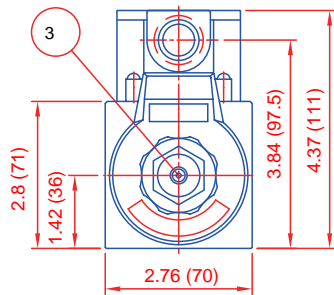
DIMENSIONS:

AC solenoid (WB Type)

■ DG05-*A AC* 72WB

* B

*F

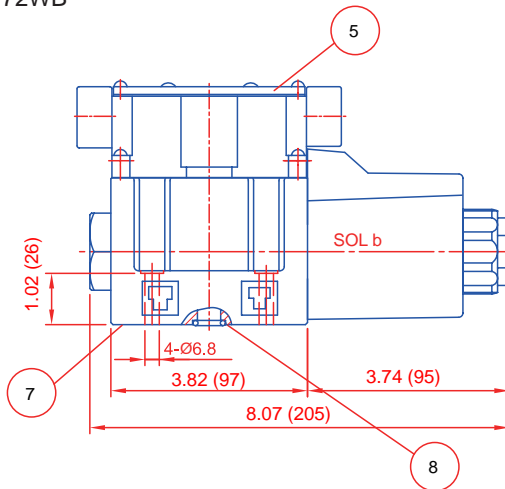


Dimensions: inches (mm)

■ DG05-*AL AC* 72WB

* B

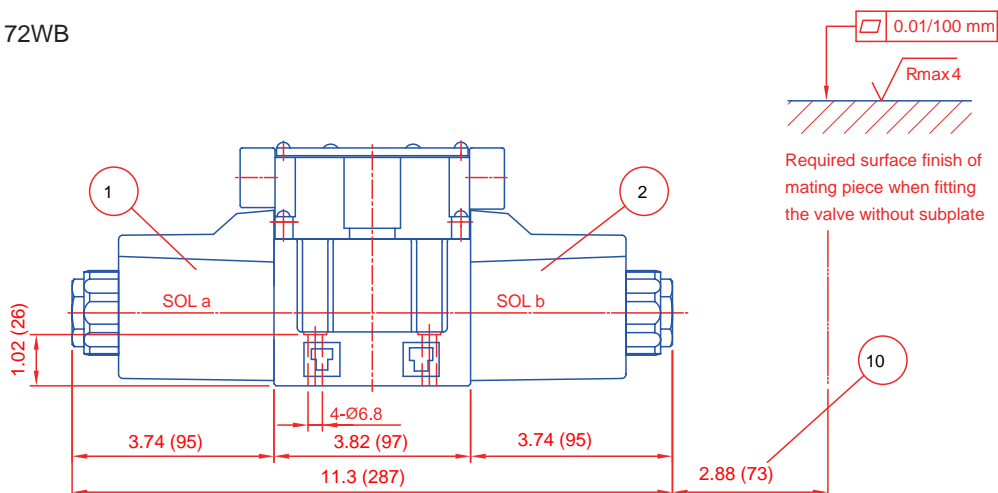
*F



- 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: not exceeding 10.5 N.m
- 7: Connections to DIN 24340 from a10; valve fixing screws m6*35 DIN 912-10.9 tightening torque 12~15 Nm
- 8: O-ring AS568-014 (Hs90)
- 9: Plug for valves with 1 solenoid
- 10: Coil removable length

■ DG05-*C-AC* 72WB

*N



Dimensions: inches (mm)

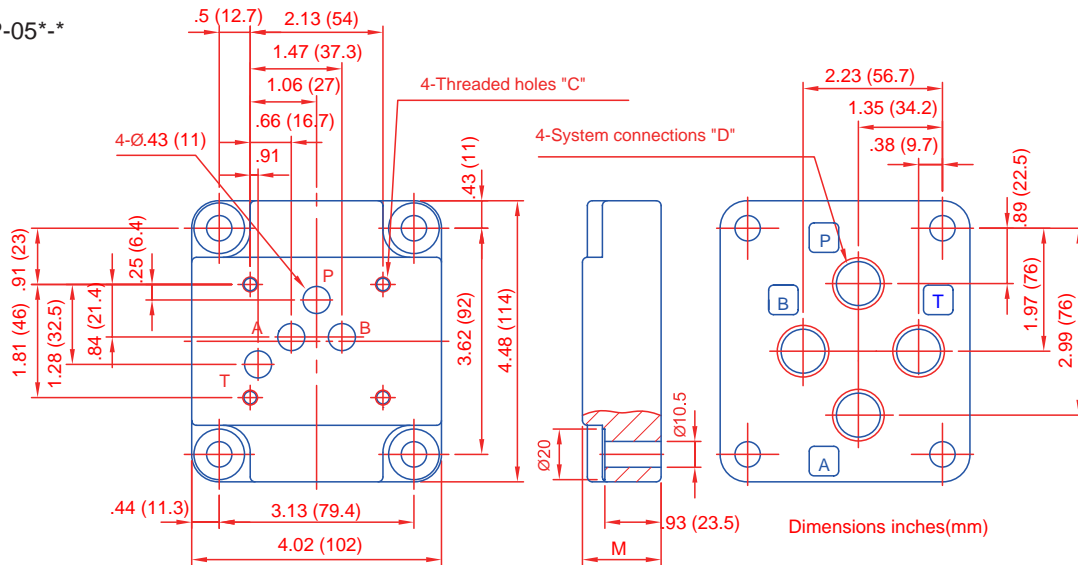
IFP DG05 SUBPLATE

DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

SUBPLATE DIMENSIONS:

Bottom Connection

■ DGSP-05*-*

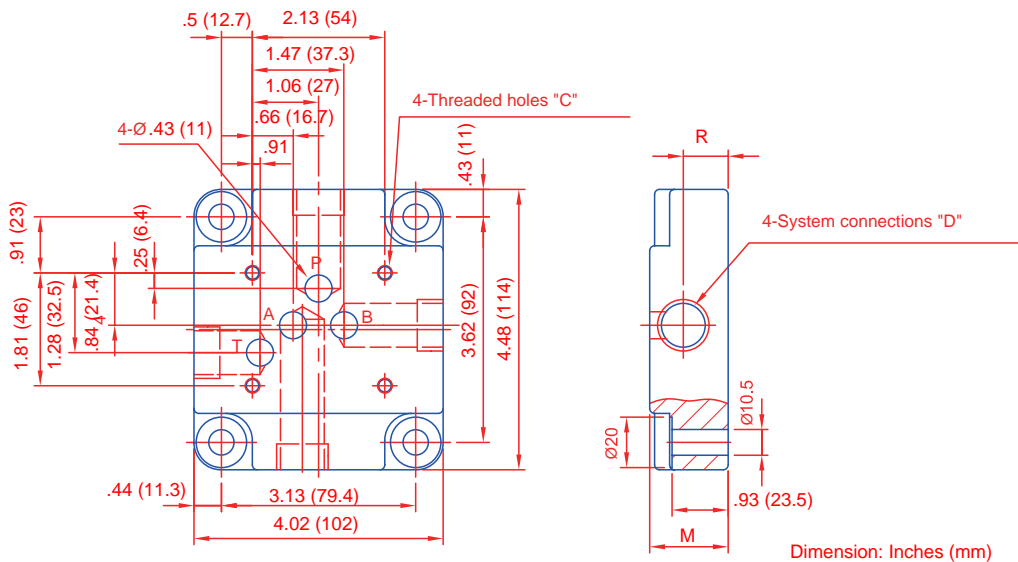


model	C	D	M	Weight
DGSP-05N 08	1/4"-20 UNC-2B	1/2" NPT	1.26	4.6 lbs
DGSP-05N 12	Thd 1/2" Deep	3/4"NPT	1.5	5.3 lbs
DGSP-05S 8		1/2" SAE	1.26	4.6 lbs
DGSP-05S 12		3/4"SAE	1.5	5.3 lbs

model	C	D	M	Weight
DGSP-05-8	M6 *14 Deep (Min)	1/2" NPT	32	2.1 Kgs
DGSP-05-12		3/4"NPT	38	2.4 Kgs
DGSP-05G-8	Full Thread Depth	1/2" SaE	32	2.1 Kgs
DGSP-05G-12		3/4" SaE	38	2.4 Kgs

Side Connection

■ DGSP-05*-*E



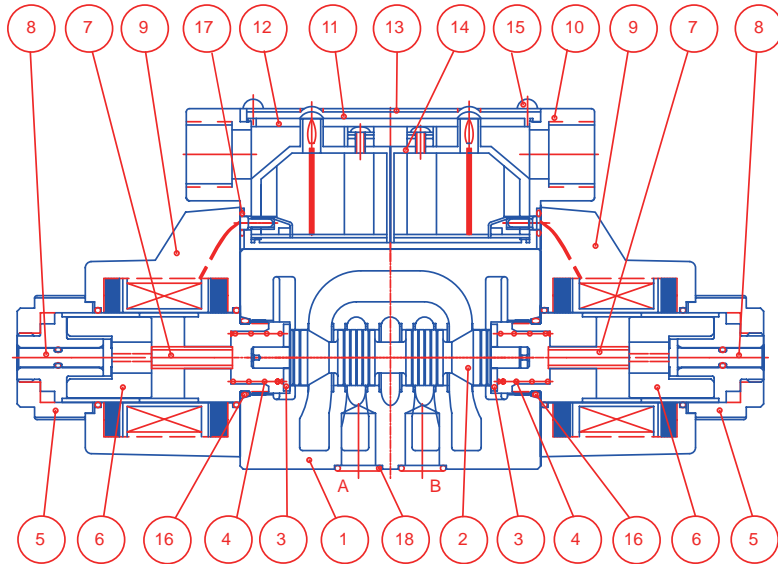
model	C	D	M	R	Weigh
DGSP-05N 8E	1/4"-20 UNC-2B	1/2"NPT	1.26	.63	4.6 LBS
DGSP-05N 12E		3/4 NPT	1.5	.71	5.3 LBS
DGSP-05S 8E	Thd 1/2" Deep	1/2"SAE	1.26	.63	4.6 LBS
DGSP-05S 12E		3/4"SAE	1.5	.71	5.3 LBS

model	C	D	M	R	Weight
DGSP-05-8E	M6 *14 Deep (Min)	1/2" RC	32	16	2.1 Kgs
DGSP-05-12E		3/4"RC	38	18	2.4 Kgs
DGSP-05G-8E	Full Thread Depth	1/2"BSP	32	16	2.1 Kgs
DGSP-05G-12E		3/4"BSP	38	18	2.4 Kgs

IFP DG05 CROSS SECTION DIAGRAM WITH SPEC

CROSS SECTION DRAWING:

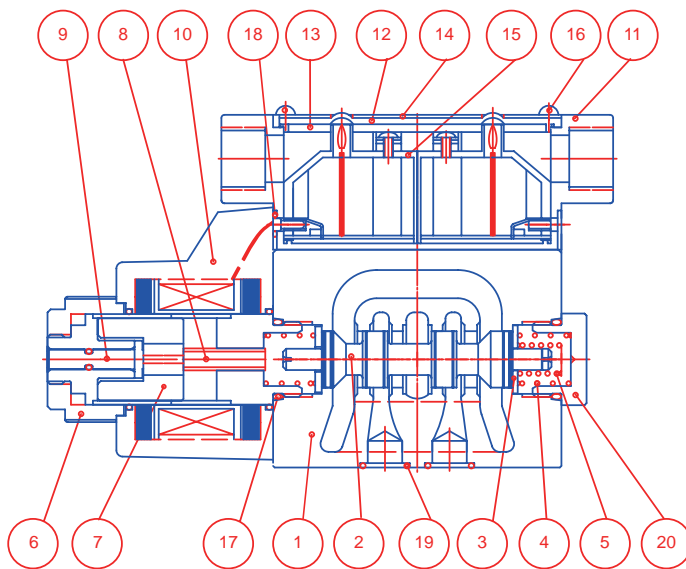
■ DG05-*C- AC/DC



NO.	PARTS NAME	PARTS NO.	QTY
16	O-ring	P22 N90	2
17	O-ring	P4 N70	4
18	O-ring	AS568-014 N90	5

NO.	parts name
1	body
2	spool
3	retainer
4	spring
5	nut
6	plunger
7	push pin
8	pin
9	coil
10	box
11	plate
12	packing
13	name plate
14	terminal
15	tap screw
16	O-ring
17	O-ring
18	O-ring

■ DG05-*A AC/DC



NO.	PARTS NAME	PARTS NO.	QTY
17	O-ring	P22 N90	2
18	O-ring	P4 N70	2
19	O-ring	AS568-014 N90	5

NO.	parts name
1	body
2	spool
3	retainer
4	spring
5	spring
6	nut
7	plunger
8	push pin
9	pin
10	coil
11	box
12	plate
13	packing
14	name plate
15	terminal
16	tap screw
17	O-ring
18	O-ring
19	O-ring
20	plug