

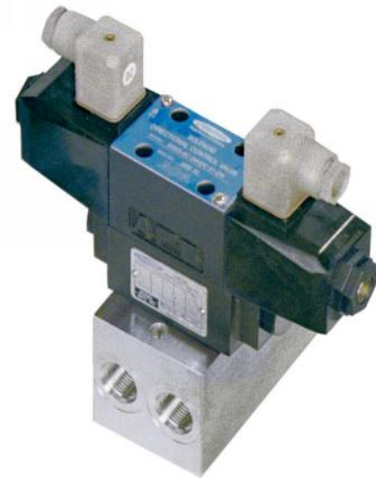


IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE

Size NG-6/CETOP-03

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

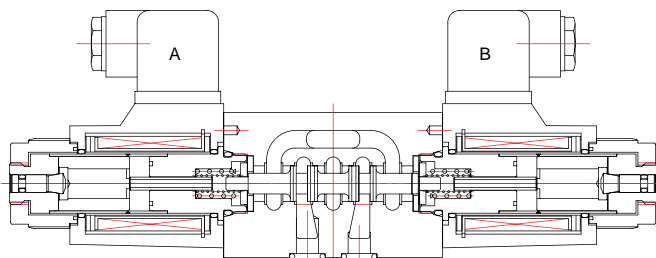


SPECIFICATION :

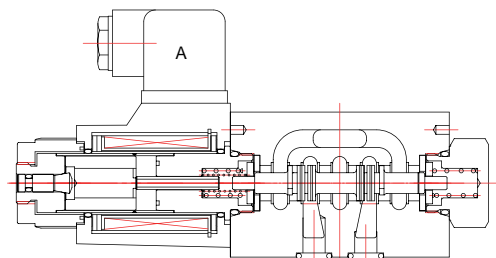
Maximum Flow Rate	25 GPM (95 LPM)	
Maximum Operating Pressure	4500 PSI (360Bar)	
Maximum Permissible Back Pressure	2285 PSI (160Bar)	
Ambient Temperature Range	5°~122°F (-15°C~70°C)	
Hydraulic Fluid Temperature	5°~158°F (-15°C~70°C)	
Viscosity Range	15~400 mm²/S	
Hydraulic Oil	ISO VG 32,46,68	
Fluid Cleanliness	NAS Class 9 max	
Degree of Protection to DIN40050 & IEP	IP 65	
Maximum Change over Frequency	240 Times/min (AC/DC)	
	120 Times/min (rF)	
Mounting Pattern	ISO 4401-AB-03-4-A	
App.Weight Lbs (Kg)	Single solenoid (AC/DC)	3.5lbs(1.6) / 3.7lbs(1.7)
	Double solenoid (AC/DC)	4.4lbs(2.0) / 4.6lbs(2.1)
Valve Fixing Screws	Metric	M5*45l (4pcs)
	Inch	10 ~24UNCx1-3/4"L (4pcs)
Tightening Torque	45 ~60in/lbs (5~7Nm)	

CROSS SECTION DIAGRAM:

■ DG03-2C-AC*-72DN



■ DG03-2A-AC*-72DN



IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-6/CETOP-03

ORDERING CODE :

D G 03-2C-115VAC-72-DN

1	2	3	4	5	6	7	8	9
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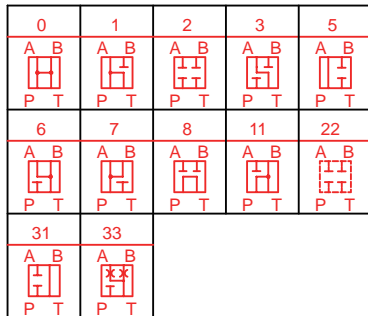
1 DIRECTIONAL CONTROL VALVE

2 MANIFOLD or SUBPLATE MOUNT

3 NOMINAL VALVE SIZE:

NG 6, CETOP 3 and ISO 4401-03

4 TYPE OF SPOOL (CENTER CONDITION)



- | | |
|------------------------------|------------------------------|
| 0: Open center (all ports) | 8: Tandem center (P to T) |
| 1: Open center (P, a to T) | 11: Open center (P, B to T) |
| 2: Closed center (all ports) | 22: Closed center (two way) |
| 3: Closed center (P, B) | 31: Closed center (P, a) |
| 5: Closed center (T, B) | 33: Closed center (bleed aB) |
| 6: Closed center (P only) | |
| 7: Open center (P to a, B) | |

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 SOLENOID VOLTAGE

115VAC: AC110V 50HZ/AC120V 60HZ

R1: AC110V, 50/60Hz; rectifier built-in type

220VAC: AC220V, 50Hz/AC240V, 60Hz;

R2: CC220V, 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

LS: Surge Killer

IIFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-6/CETOP-03

SPOOL TYPES:

*(): Rexroth Model

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)	DG03-0C 	DG03-0B 	DG03-0BL
1(F)	DG03-1C 	DG03-1B 	DG03-1BL
2(E)	DG03-2C 	DG03-2B 	DG03-2BL
	/		DG03-2F
3(L)	DG03-3C 	DG03-3B 	DG03-3BL
5	DG03-5C 	DG03-5B 	DG03-5BL
6(J)	DG03-6C 	DG03-6B 	DG03-6BL
7(M)	DG03-7C 	DG03-7B 	DG03-7BL
8(G)	DG03-8C 	DG03-8B 	DG03-8BL
11(P)	DG03-11C 	DG03-11B 	DG03-11BL
31(U)	DG03-31C 	DG03-31B 	DG03-31BL
33(W)	DG03-33C 	DG03-33B 	DG03-33BL

IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-6/CETOP-03

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(H)	 DG03-2N	DG03-0A 	DG03-0AL
2(E)		DG03-2A 	DG03-2AL
6(J)		DG03-6A 	DG03-6AL
7(M)		DG03-7A 	DG03-7AL
22(A)		DG03-22A 	DG03-22AL

FEATURES OF ELECTRO-MANGNETIC COIL :

Solenoid Classification	Power Source	Voltage (V)		Inrush Current (A)	Holding Current (A)	Holding Power (W)	Permissible Voltage (%)	Insulation Grade	Coil Insulation Class	Insulation
AC	A1	110	50	1.6	0.47	23	+10,-15	B	H (180°C)	>50
		120	60	1.5	0.42	24	+10,-15			
	A2	220	50	0.8	0.24	23	+10,-15			
		240	60	0.75	0.21	24	+10,-15			
DC	D1	12	-	-	2.4	29	+10,-10	B	H (180°C)	
	D2	24	-	-	1.16	28				
RF	R1	AC110V, 50/60 Hz		-	0.33	30	+10,-10	B	H (180°C)	
		DC99V								
	R2	AC220V, 50/60 Hz		-	0.16	30	+10,-10			
		DC198V								

IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-6/CETOP-03

PERFORMANCE FIGURES & CURVES:

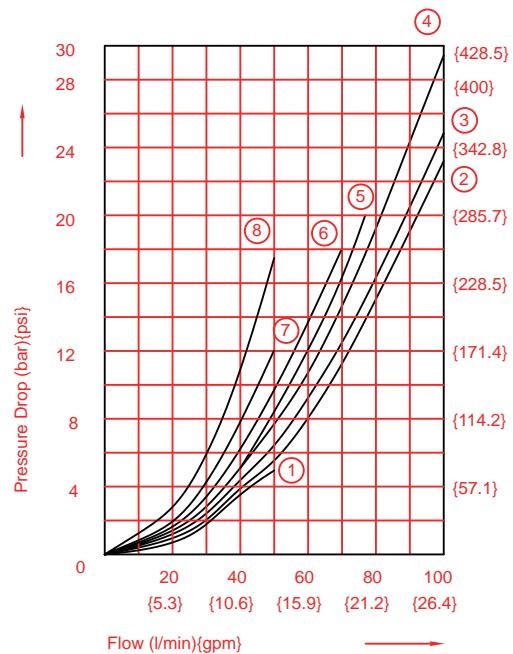
Pressure Drop Curve Reference Chart

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	4	1	4	1	5
1	6	8	6	8	7
2	4	2	4	2	-
3	5	2	5	2	-
6	5	2	5	2	-
7	4	3	4	3	-
8	6	8	6	8	7
11	6	8	6	8	7
31	5	8	5	2	-
33	5	2	5	2	-

Spool Type	A,AL			
	Control Position			
	P→A	B→T	P→B	A→T
0	4	2	4	2
2	4	6	4	6
6	5	2	5	2
7	4	3	4	3
22	4	-	4	-

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



WIRING:

<p>■ DG03-*C-*-72-WB</p>	<p>Note:</p> <ol style="list-style-type: none"> 1. Com terminal is fitted in double solenoid valve for easiness of wiring. 2. use a ground terminal when ground wiring is necessary. 3. use a compressed terminal for m3. 4. Fasten the screw of the terminal with 4.3 - 6.1 lbs torqu 	<p>■ DG03-*-*-72-DN</p>
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IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG 6/CETOP 03

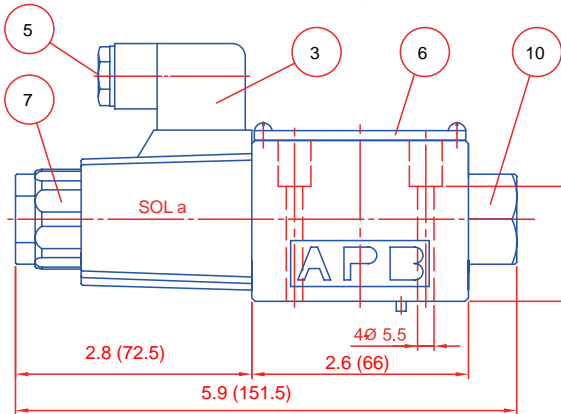
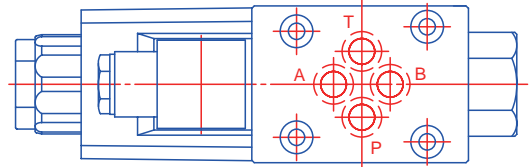
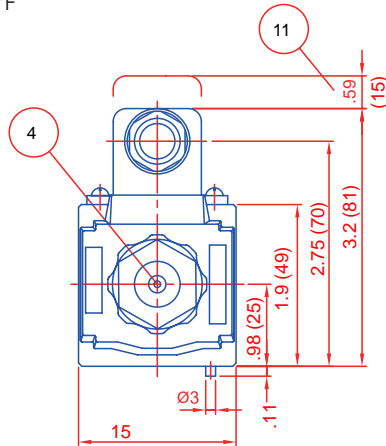
DIMENSIONS:

AC solenoid (DN Type)

■ DG03-*A AC-72-DN

*B

*F

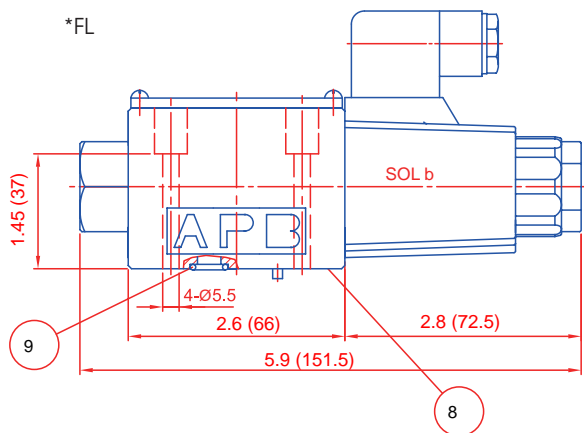


Dimensions: inches (mm)

■ DG03-*AL-AC-72-DN

*BL

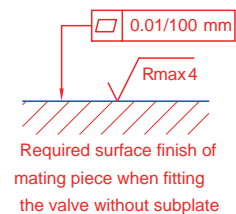
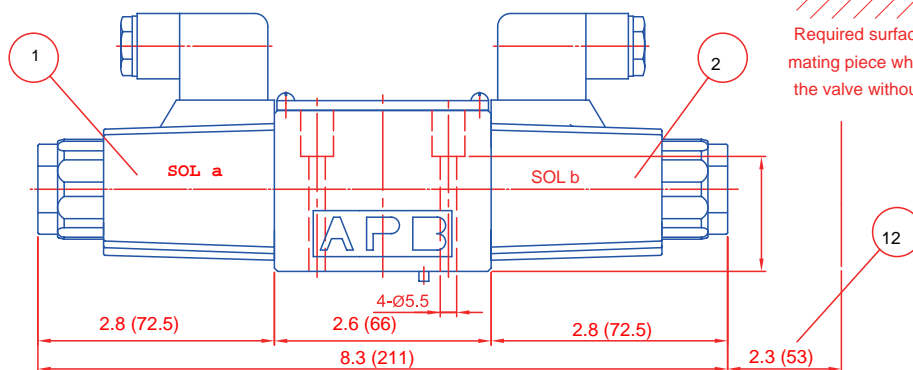
*FL



- 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 $\varnothing 8 \sim 10$ mm)
- 6: Nameplate
- 7: Lock nut with torque in the range 4~6 N.m
- 8: Connections to DIN 24340 from A6 valve fixing screws
M5x45 DIN 912-1.9 tightening torque 5~7 Nm
- 9: O-ring P9 N90
- 10: Plug for valves with 1 solenoid
- 11: Space required to remove plug
- 12: Coil removable length

■ DG03-*C-AC*-72-DN

*N



Dimensions: inches (mm)

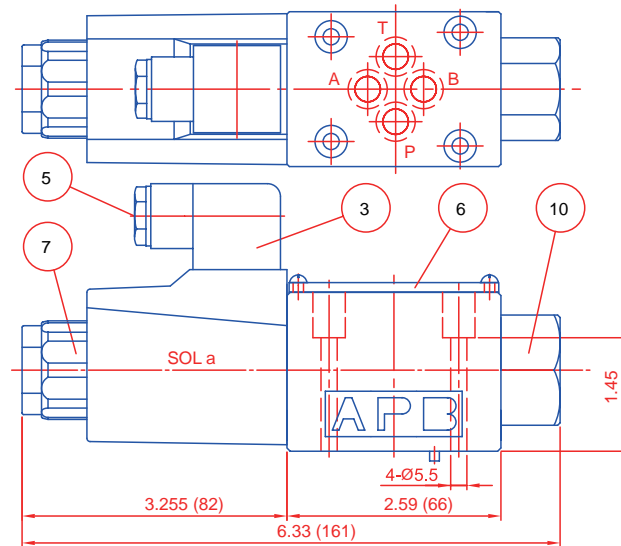
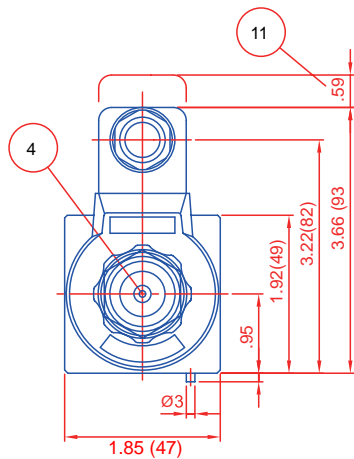
IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE 6 NG-6/CETOP-03

DIMENSIONS:
 DC solenoid (DN Type)

■ DG03-*DC*-72DN

*B

*F

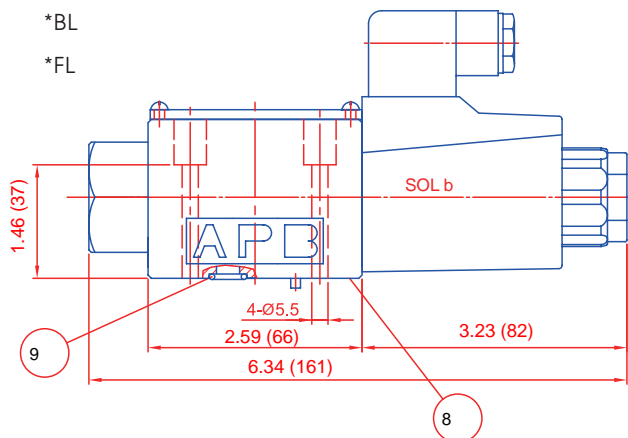


DIMENSIONS: Inches (mm)

■ DG03-*AL-DC*-72DN

*BL

*FL

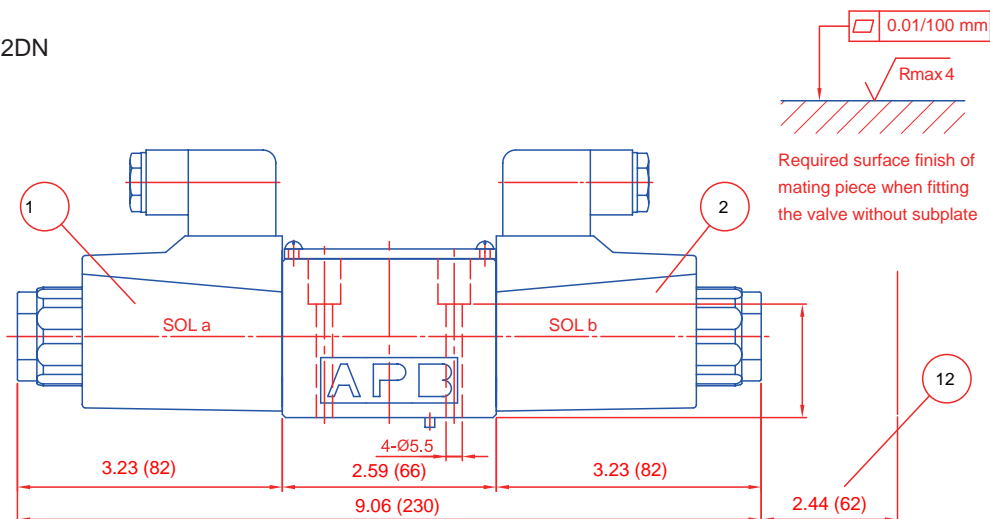


- 1: Solenoid a, color of plug: grey
- 2: Solenoid b, color of plug: black
- 3: Angled plug to DIN 43650
- 4: Push pin for manual operation
- 5: Lead wire take-out (Cable diameter $\bar{r}6 \sim 9$ mm)
- 6: Nameplate
- 7: Lock nut with torque in the range 4~6 N.m
- 8: Connections to DIN 24340 from A6; valve fixing screws M5x45 DIN 912-10.9 tightening torque 5~7 Nm
- 9: O-ring P9 N90
- 10: Plug for valves with 1 solenoid
- 11: Space required to remove plug
- 12: Coil removable length

DIMENSIONS: Inches (mm)

■ DG03-*C-DC*-72DN

*N



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

Dimensions: inches (mm)

IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-6/CETOP-03

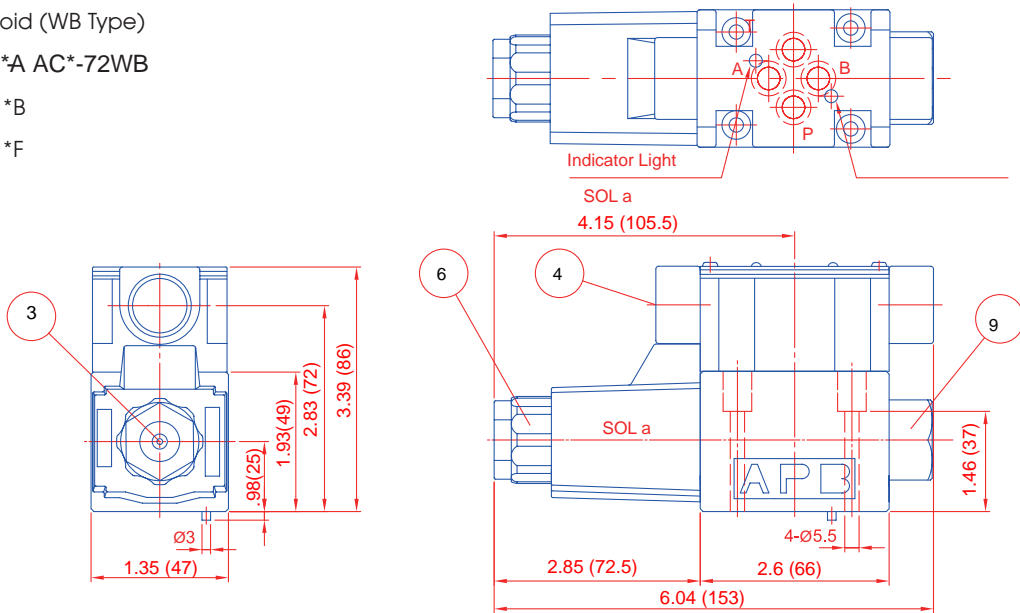
DIMENSIONS:

AC solenoid (WB Type)

■ DG03-*A AC*-72WB

*B

*F

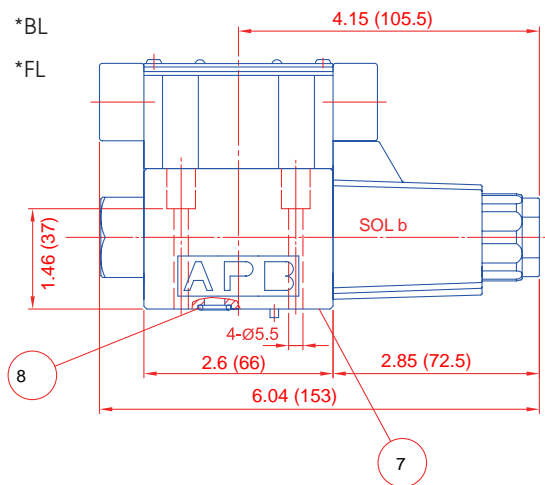


Dimensions: inches (mm)

■ DG03-*AL-AC*-72WB

*BL

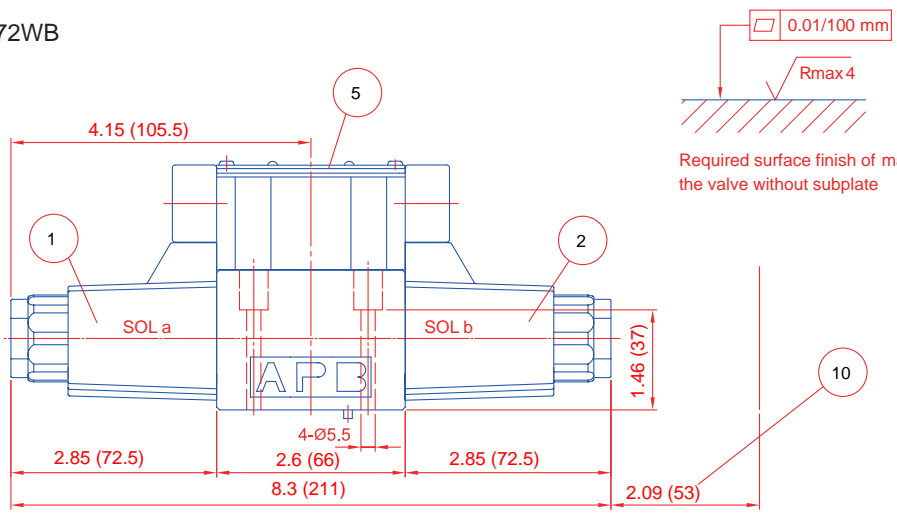
*FL



- 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 in the range 4~6 N.m
- 7: Connections to DIN 24340 from A6; valve fixing screws M5x45 DIN 912-10.9 tightening torque 5~7 Nm
- 8: O-ring P9 N90
- 9: Plug for valves with 1 solenoid
- 10: Coil removable length

■ DG03-*C-AC*-72WB

*N



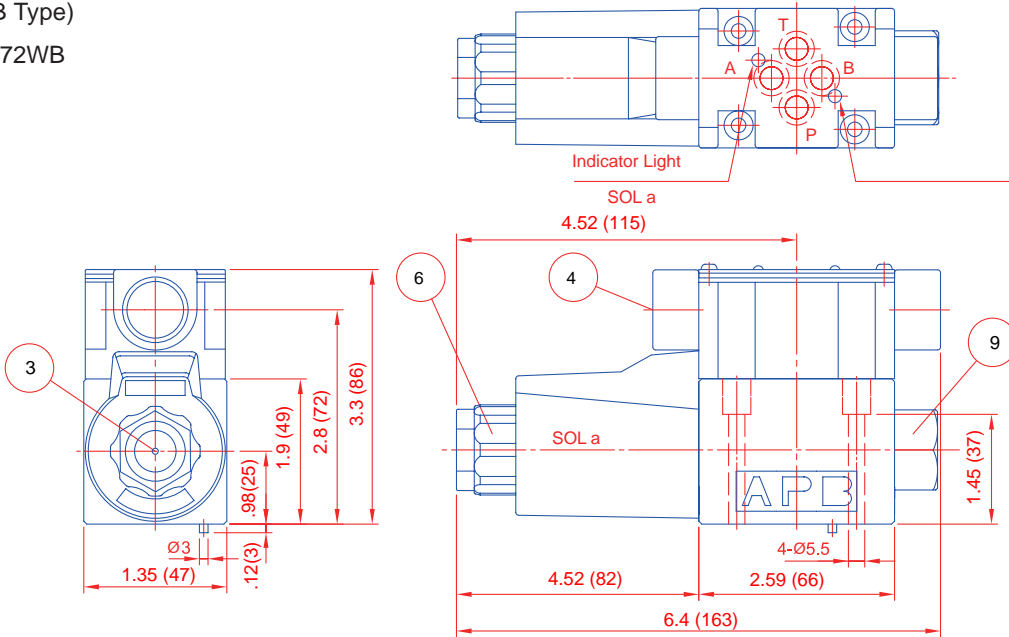
Dimensions: inches (mm)

IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE 6 NG-6/CETOP-03

DIMENSIONS:
 DC solenoid (WB Type)

■ DG03-*A-DC*-72WB

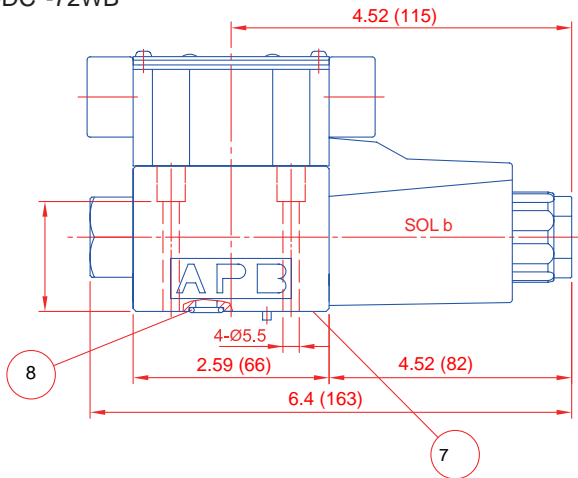
- *B
- *F



Dimensions: inches (mm)

■ DG03-*AL-DC*-72WB

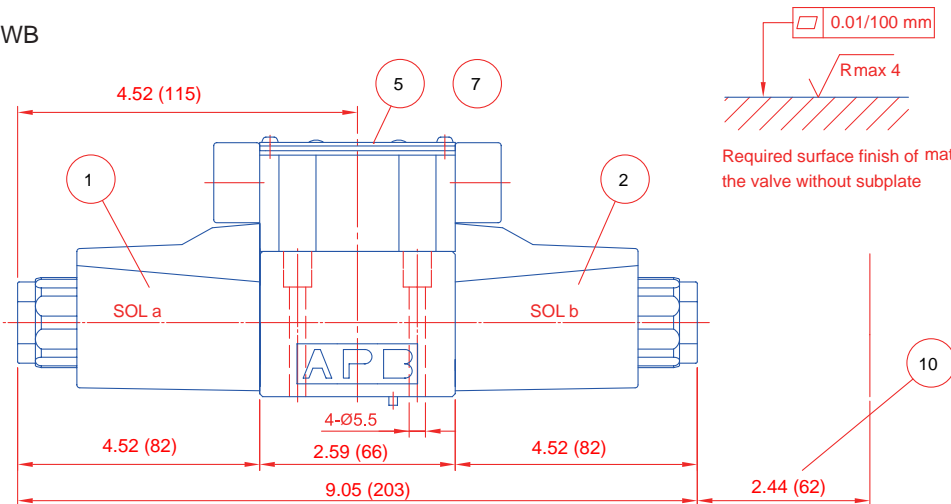
- *BL
- *FL



- 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 in the range 4~6 N.m
- 7: Connections to DIN 24340 from A6; valve fixing screws M5x45 DIN 912-10.9 tightening torque 5~7 Nm
- 8: O-ring P9 N90
- 9: Plug for valves with 1 solenoid
- 10: Coil removable length

■ DG03-*C-DC*-72WB

- *N



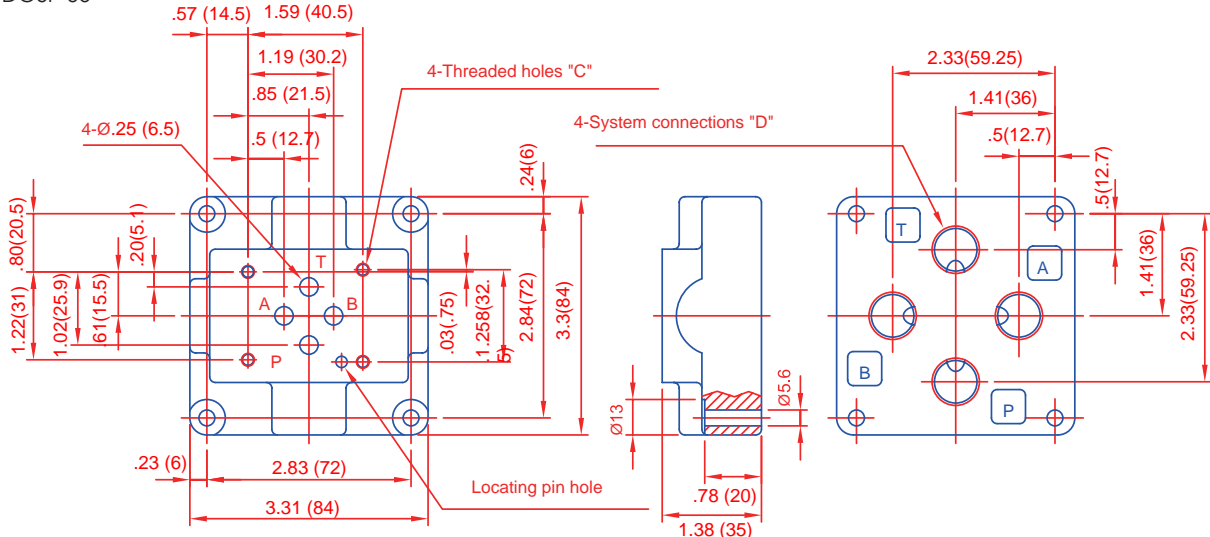
Dimensions: inches (mm)

IFP DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-6/CETOP-03

SUBPLATE DIMENSIONS:

Bottom Connection

■ DGSP-03*-*



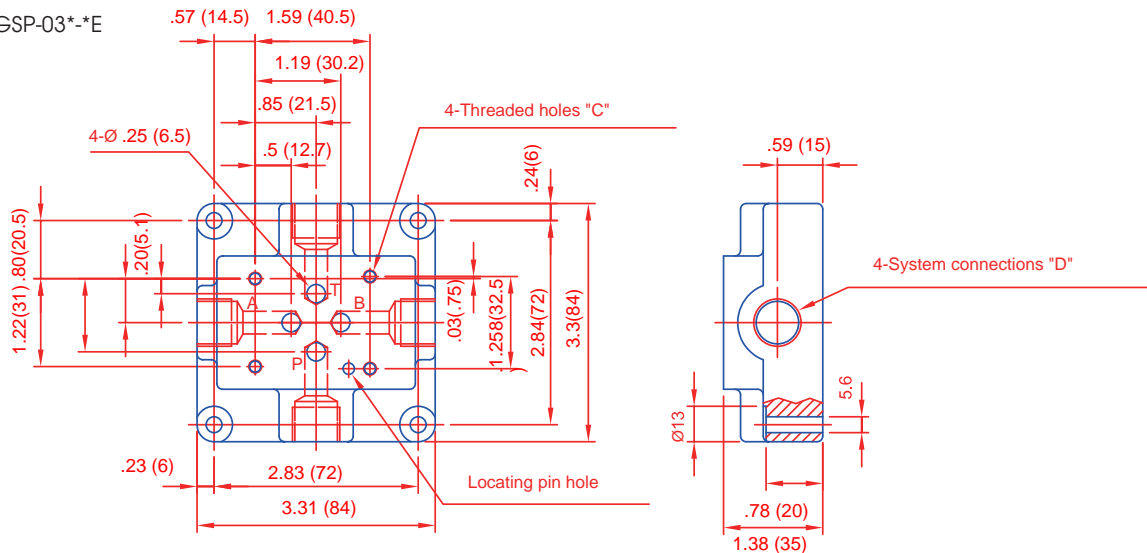
Dimensions: inches (mm)

Model	C	D	Weight
DGSP-03N-6	NO. 10-24UNC-2B	3/8"NPT	3.0 Lbs 1.4 Kgs
DGSP-03N-8	Thrd. 1/2" Deep	1/2"NPT	
DGSP-03S-6	Full Thread Depth	3/8"SAE	
DGSP-03S-8		1/2"SAE	

Model	C	D	Weight
DGSP-03-6	M5 *14 Deep (Min) Full Thread Depth	3/8"Rc	3.0 Lbs 1.4Kgs
DGSP-03-8		1/2"Rc	
DGSP-03G-6		3/8"BSP	
DGSP-03G-8		1/2"BSP	

Side Connection

■ DGSP-03*-*E



Dimensions: inches (mm)

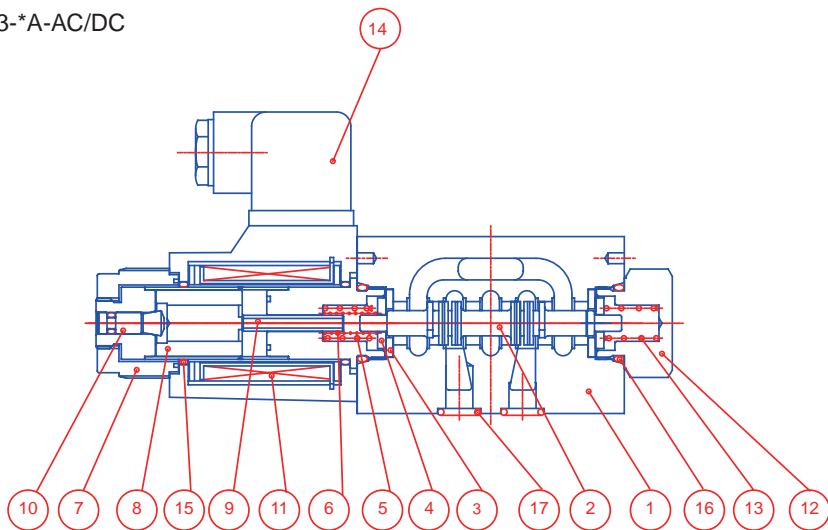
Model	C	D	Weight
DGSP-03N-6E	Nbr.10-24UNC-2B Thrd. 1/2" Deep Full Thread Depth	3/8"NPT	3.0 Lbs 1.4 Kgs
DGSP-03N-8E		1/2"NPT	
DGSP-03S-6E		3/8"SAE	
DGSP-03S-8E		1/2"SAE	

Model	C	D	Weight
DGSP-03-6E	M5*14 Deep (min) Full Thread Depth	3/8"RC	1.4 Kgs
DGSP-03-8E		1/2"R	
DGSP-03G-6E		3/8"BSP	
DGSP-03G-8E		1/2"BSP	

IFF DG03 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-6/CETOP-03

CROSS SECTION DRAWING:

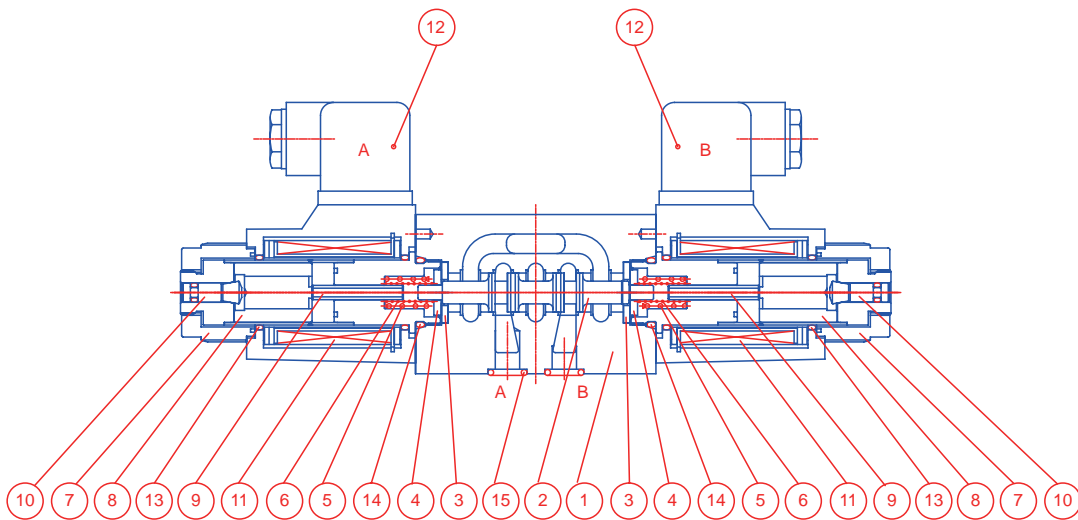
■ DG03-*A-AC/DC



NO.	parts name
1	body
2	spool
3	retainer A
4	retainer B
5	spring
6	spring
7	nut
8	plunger
9	push pin
10	pin
11	coil
12	plug
13	spring
14	connector
15	O-ring
16	O-ring
17	O-ring

NO.	PARTS NAME	PARTS NO.	QTY
15	O-ring	AS568-019 N70	2
16	O-ring	P18 N90	2
17	O-ring	P9 N90	4

■ DG03-*C-AC/DC



NO.	parts name
1	body
2	spool
3	retainer A
4	retainer B
5	spring
6	spring
7	nut
8	plunger
9	push pin
10	pin
11	coil
12	connector
13	O-ring
14	O-ring
15	O-ring

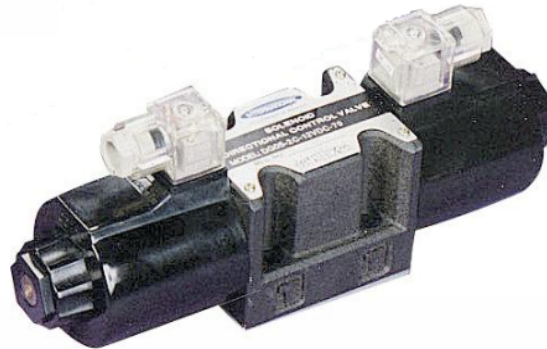
NO.	PARTS NAME	PARTS NO.	QTY
13	O-ring	AS568-019 N70	4
14	O-ring	P18 N90	2
15	O-ring	P9 N90	4

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

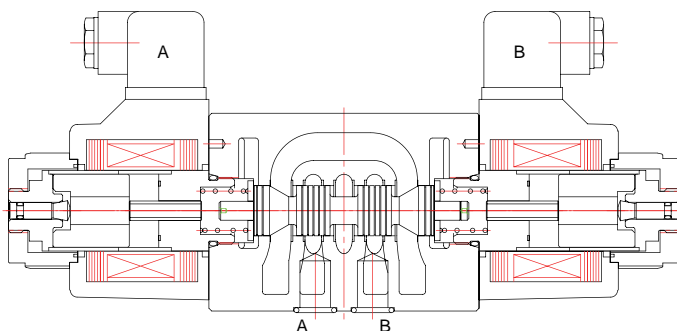


SPECIFICATION :

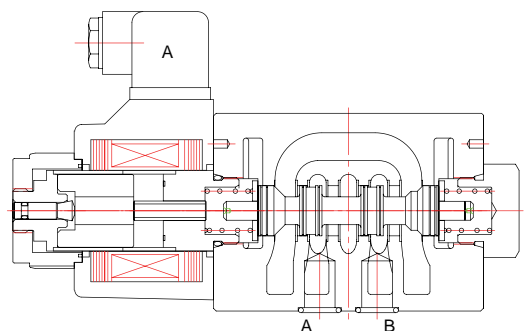
Maximum Flow rate		42 GPM (160 L/Min)
Maximum Operating Pressure		3571 PSI (250 Bar)
Maximum Permissible Back Pressure		2285 PSI (160 Bar)
Ambient Temperature		5°F~122°F(-15°C~50°C)
Hydraulic Fluid Temperature		5°F~158°F(-15°C~70°C)
Viscosity range		15~400 mm ² /S
Hydraulic Oil		ISO VG 32,46,68
Fluid 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



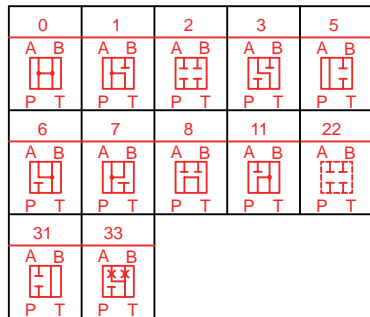
IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-5

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

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

SPOOL TYPES:

*(): Rexroth Model

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)	DG05-0C 	DG05-0B 	DG05-0BL
1(F)	DG05-1C 	DG05-1B 	DG05-1BL
2(E)	DG05-2C 	DG05-2B 	DG05-2BL
	/		DG05-2F
3(L)	DG05-3C 	DG05-3B 	DG05-3BL
5	DG05-5C 	DG05-5B 	DG05-5BL
6(J)	DG05-6C 	DG05-6B 	DG05-6BL
7(M)	DG05-7C 	DG05-7B 	DG05-7BL
8(G)	DG05-8C 	DG05-8B 	DG05-8BL
11(P)	DG05-11C 	DG05-11B 	DG05-11BL
31(U)	DG05-31C 	DG05-31B 	DG05-31BL
33(W)	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(H)		DG05-0A 	DG05-0AL
2(E)		DG05-2A 	DG05-2AL
6(J)		DG05-6A 	DG05-6AL
7(M)		DG05-7A 	DG05-7AL
22(A)		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

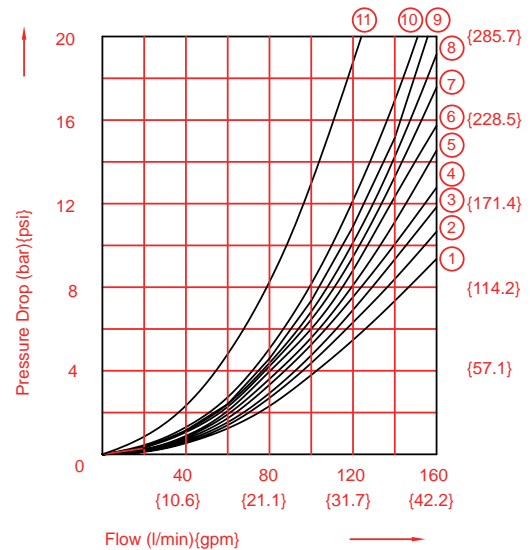
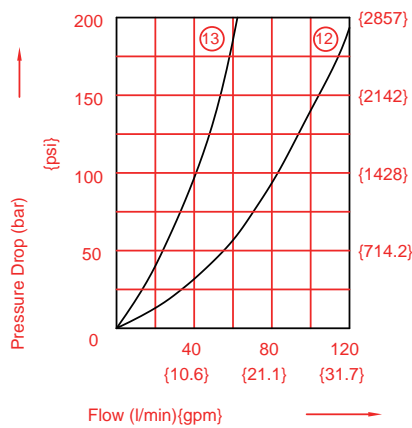
PERFORMANCE FIGURES & CURVES:
Pressure Drop Curve Reference Chart

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:

<p>■ DG05-*C*-*72 WB</p>	<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 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. 	<p>■ DG05-*-*72 DN</p>
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IFFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

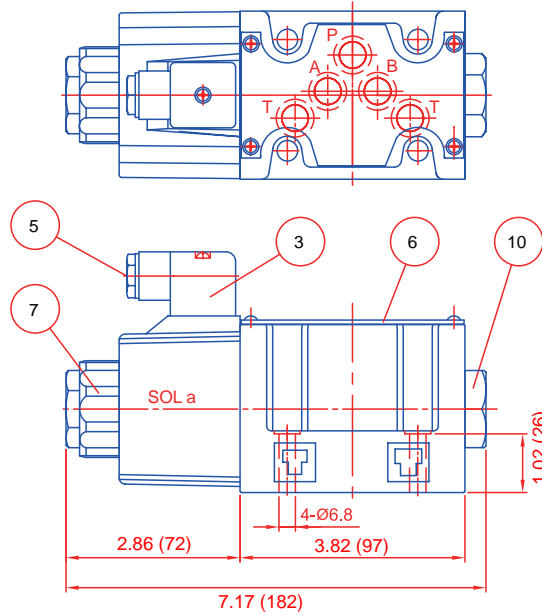
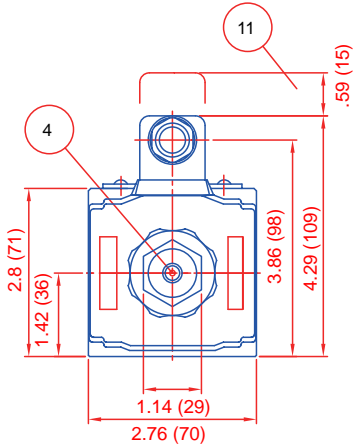
DIMENSIONS:

AC solenoid (DN Type)

■ DG05 - A - AC* 72 DN*

**B

*F



Dimensions: inches (mm)

■ DG05-*AL-AC* 72DN

*BL

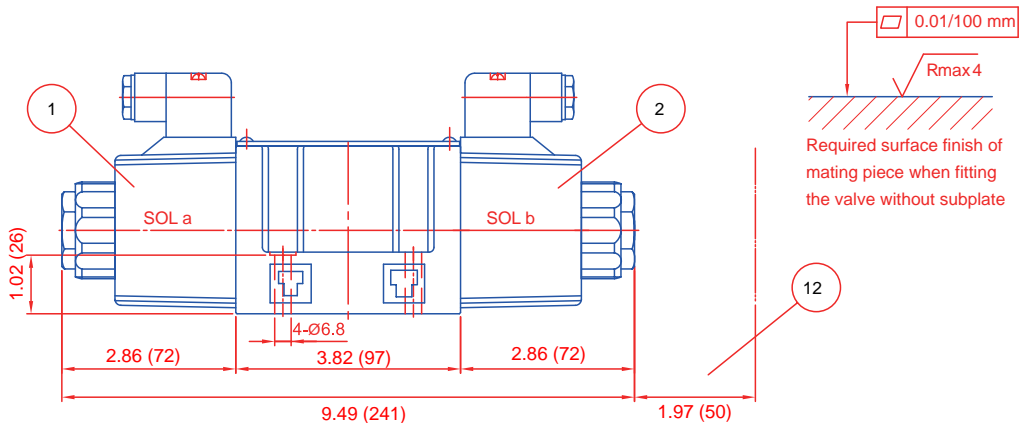
RC



- 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)

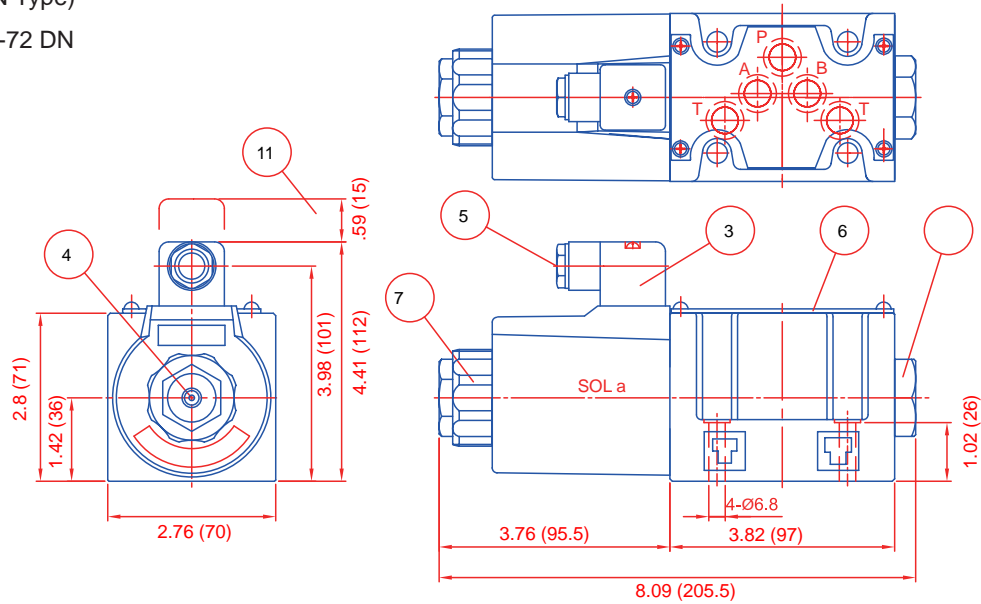
IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

DIMENSIONS: DC solenoid (DN Type)

■ DG05-*A DC*-72 DN

*B

*F

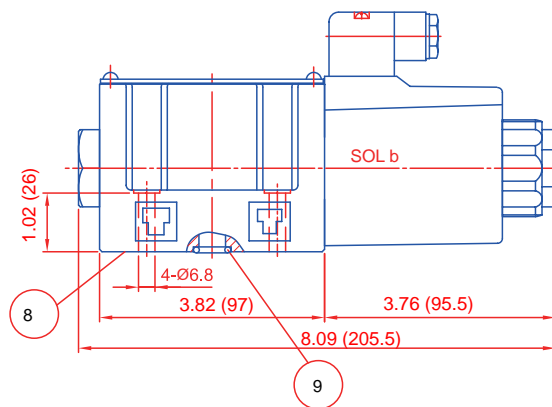


Dimensions: inches (mm)

■ DG05-*AL-DC*-72 DN

*B

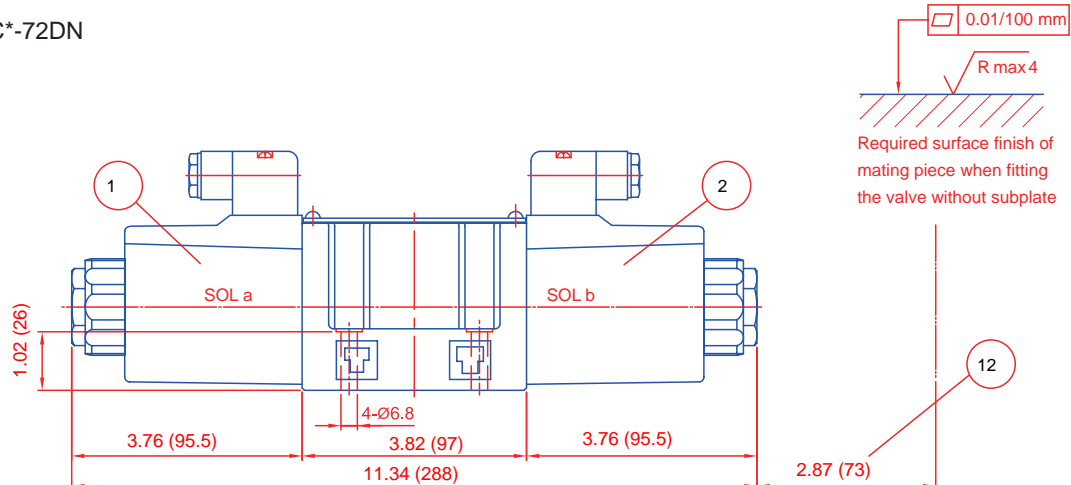
*F



- 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)

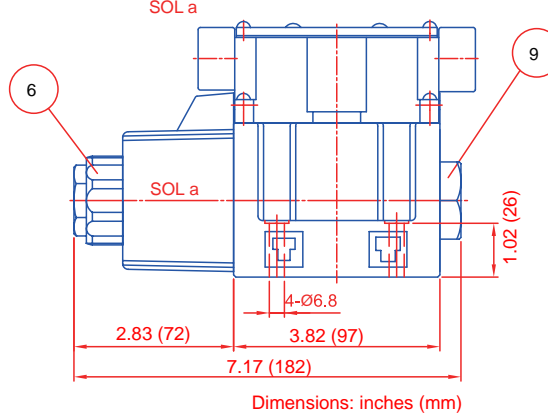
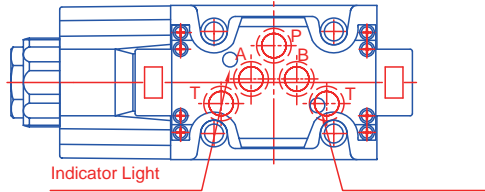
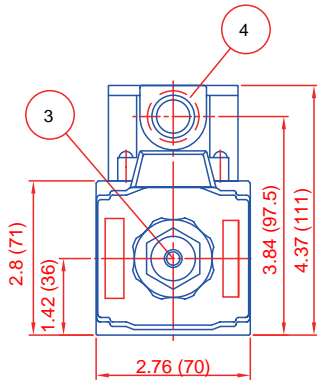
IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

DIMENSIONS:
AC solenoid (WB Type)

■ DG05-*A AC*72WB

* B

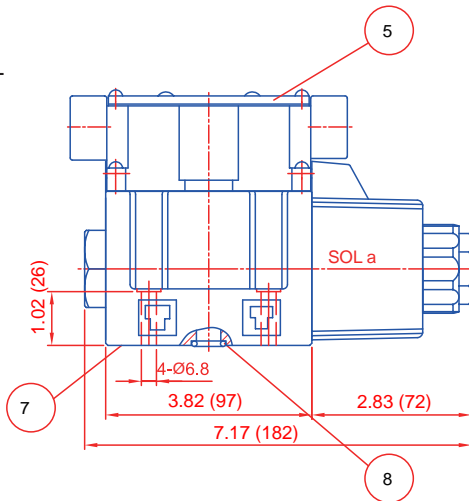
*F



■ DG05-*AL AC*72WB

* BL

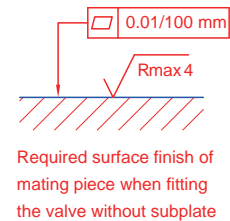
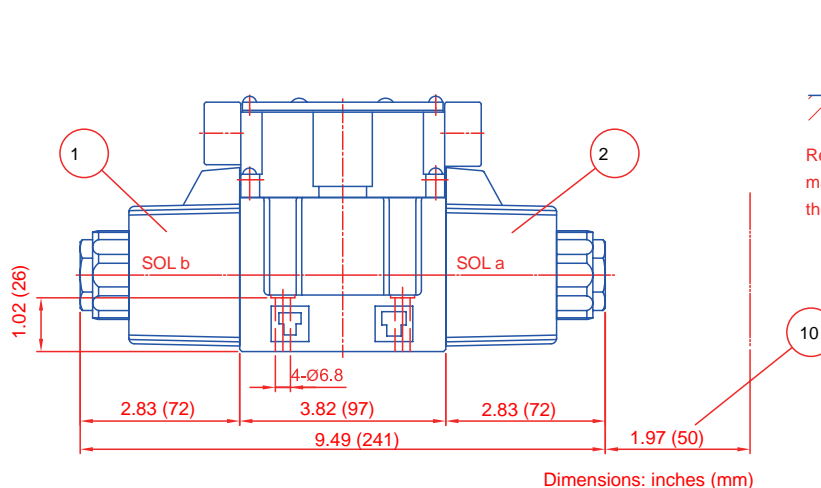
*FL



- 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

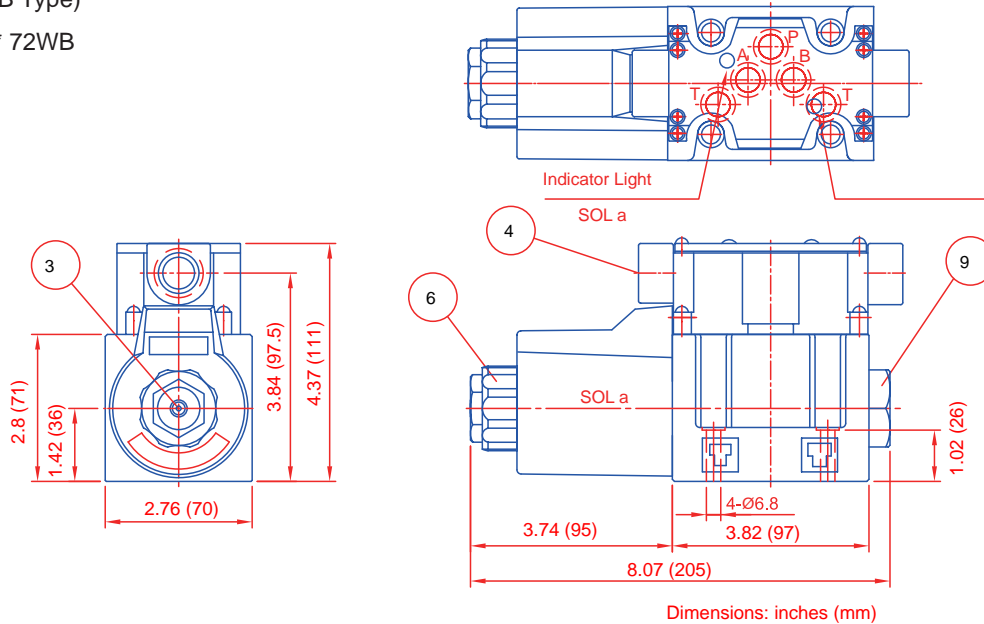


IFP DG05 SOLENOID OPERATED DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

DIMENSIONS:
 AC solenoid (WB Type)

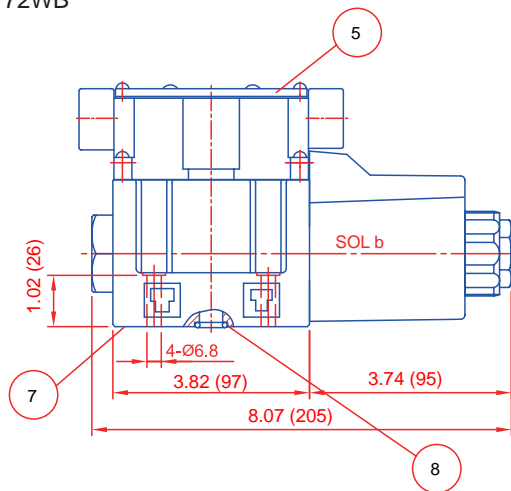
■ DG05-*A AC* 72WB

- * B
- *F



■ DG05-*AL AC* 72WB

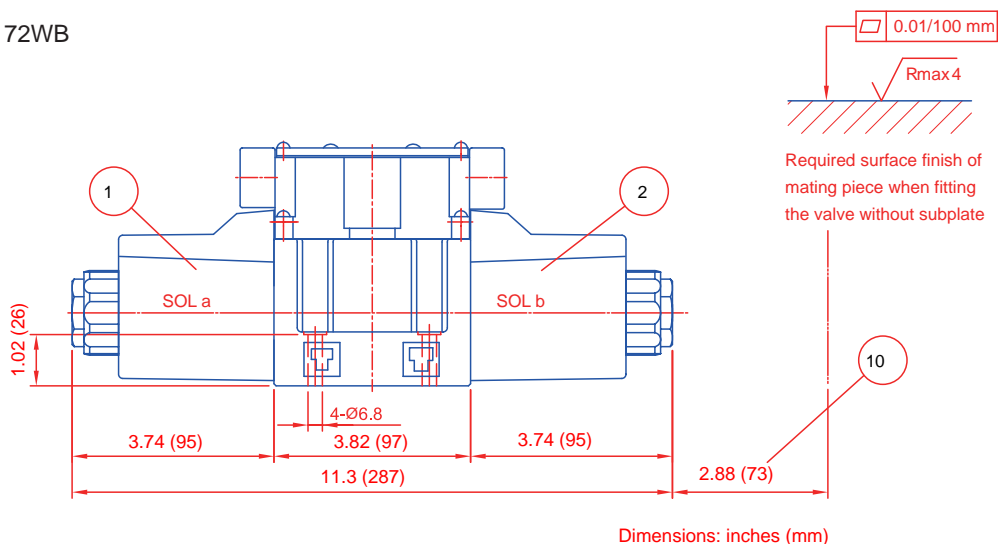
- * B
- *F



- 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



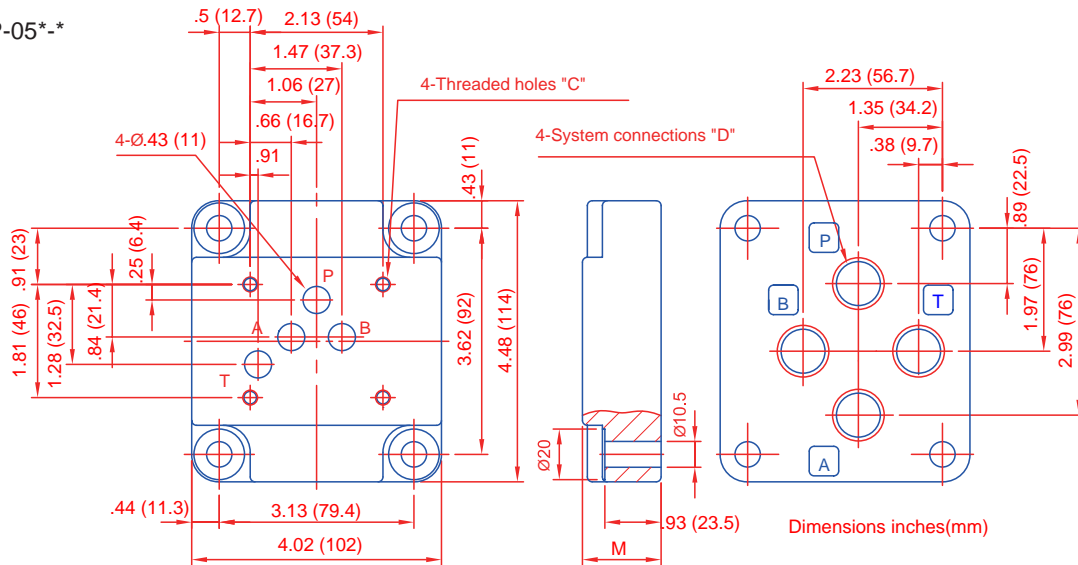
IFP DG05 SUBPLATE

DIRECTIONAL CONTROL VALVE SIZE NG-10/CETOP-05

SUBPLATE DIMENSIONS:

Bottom Connection

■ DGSP-05*-*

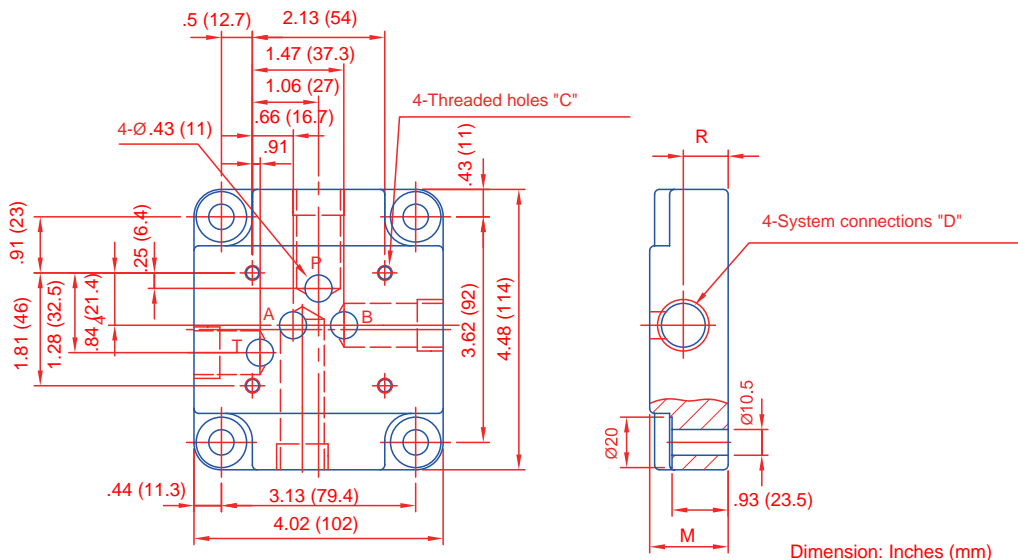


model	C	D	M	
DGSP-05N 08	1/4"-20 UNC-2B	1/2" NPT	1.26	4.6 lbs
DGSP-05N 12	Thd 1/2" Deep	3/4"NPT	1.5	5.3 lbs
DGSP-05S 8		1/2" SAE	1.26	4.6 lbs
DGSP-05S 12		3/4"SAE	1.5	5.3 lbs

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



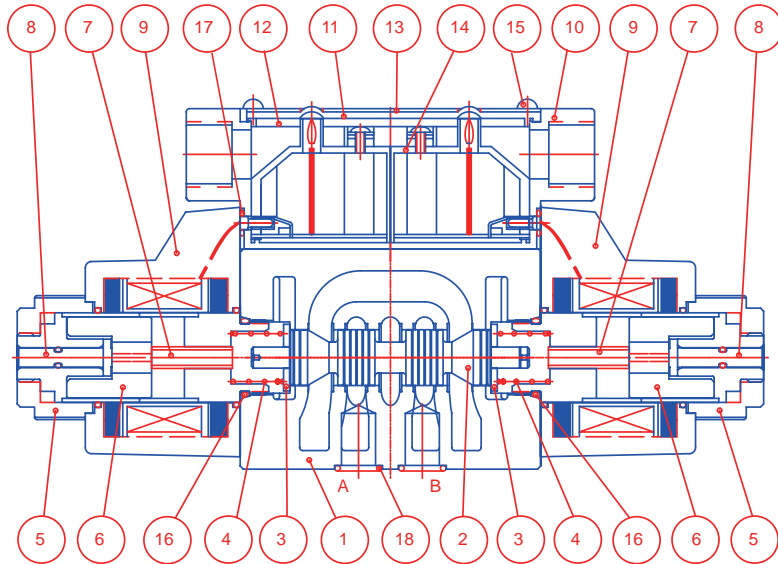
model	C	D	M	R	Weigh
DGSP-05N 8E	1/4"-20 UNC-2B	1/2"NPT	1.26	.63	4.6 LBS
DGSP-05N 12E		3/4 NPT	1.5	.71	5.3 LBS
DGSP-05S 8E	Thd 1/2" Deep	1/2"SAE	1.26	.63	4.6 LBS
DGSP-05S 12E		3/4"SAE	1.5	.71	5.3 LBS

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:

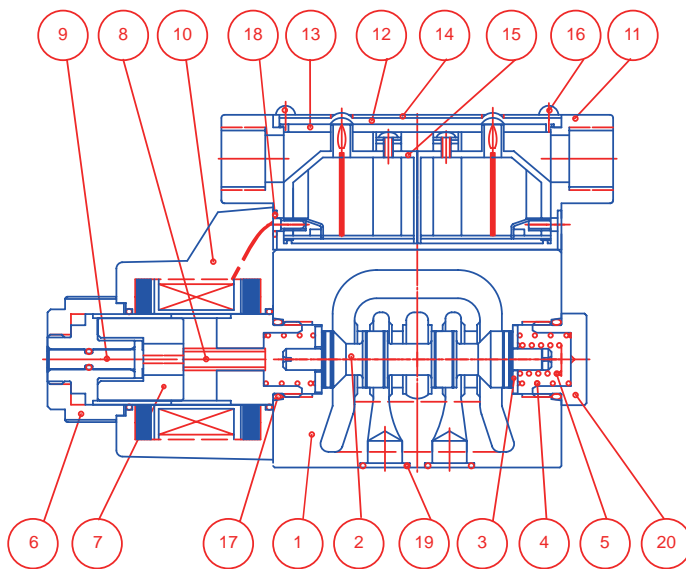
■ DG05-*C- AC/DC



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

IFP DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG-16 / CETOP-07



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

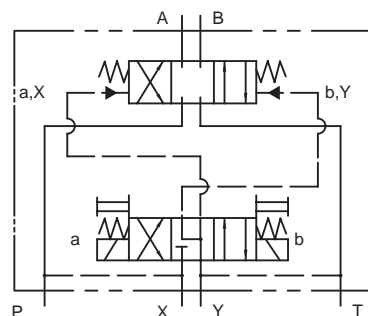


SPECIFICATIONS :

Maximum Flow rate	79 GPM (300 LPM)
Maximum Operating Pressure	4500 PSI (320 Bar)
Maximum Permissible Back Pressure	2285 PSI (160 Bar)
Pilot Pressure	174 ~ 3600 PSI(12~250 Bar)
Ambient Temperature range	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
Maximum change over frequency	120 times/min
Mounting Pattern	ISO 4401-aD-07-4-a
Approx. Weight (Valve with hydraulic operation)	16.1 lbs (7.2 Kgs)
Valve Fixing Screws	metric
	M6*50 (2 pcs)
	M10*50l (4 pcs)
	inch
Tightening Torque	1/4"~20uNCx2-1/4"l (2 pcs)
	3/8"~16uNCx2"l (4 pcs)
	106 ~ 132 IN/LBS (12 ~ 15 Nm)
	500 ~ 630 IN/LBS (58 ~ 72 Nm)

HYDRAULIC SYMBOL:

■ DG07-E-*C-T-*-*



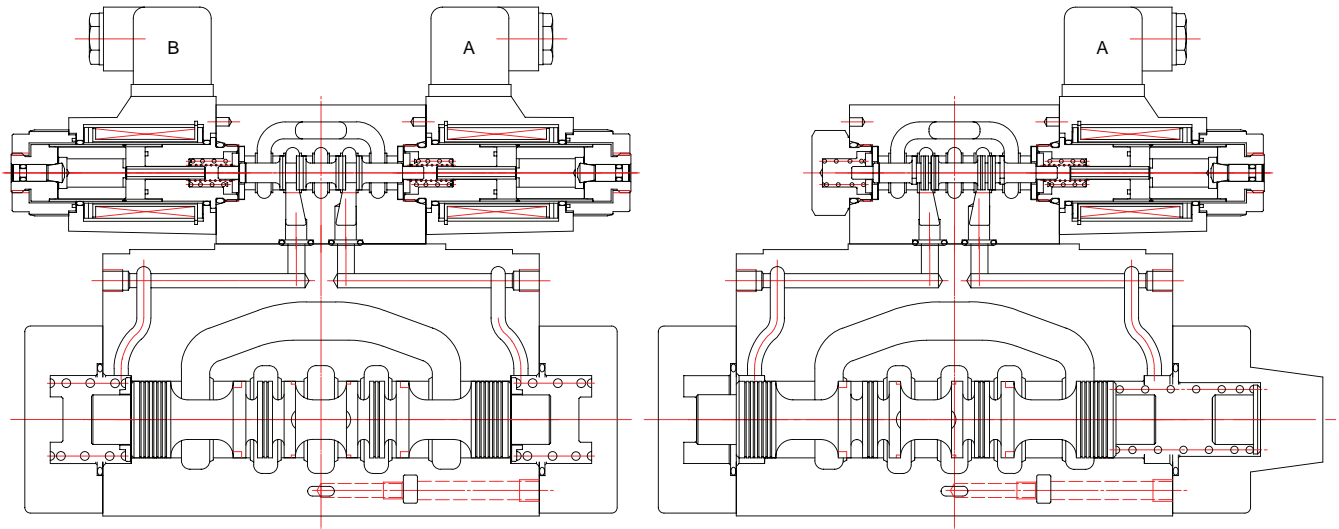
IFP DG07 SOLENOID CONTROLLED

PILOT OPERATED DIRECTIONAL VALVE SIZE NG-16 / CETOP-07

CROSS SECTION DIAGRAM:

■ DG07-2C-AC*-72DN

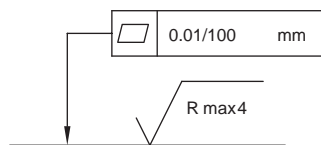
■ DG07-2A-AC*-72DN



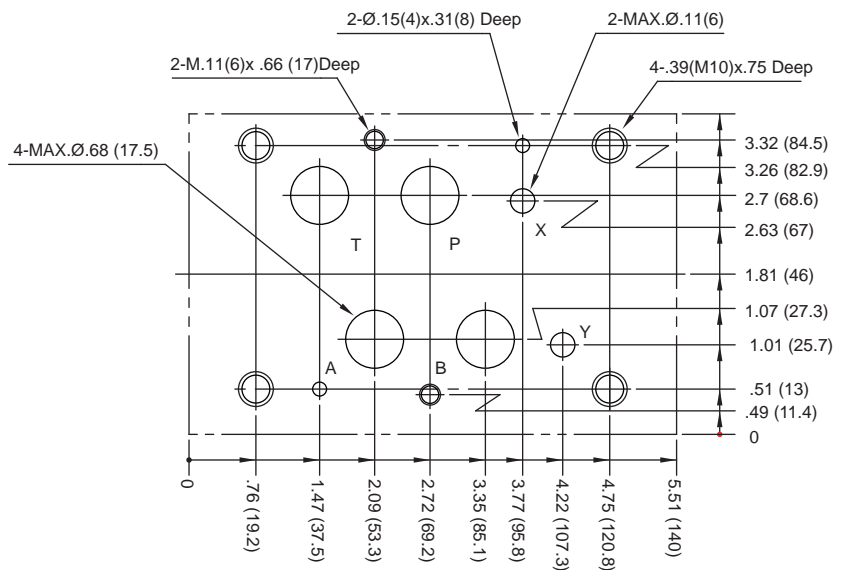
INSTALLATION DIMENSIONS:

(machined valve mounting face with position of ports)VAVE

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



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



Dimension: Inches (mm)

IIFP DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG16/CETOP-07

ORDERING CODE :

DG 07 -2 C- ET A1 15- 72 - DN - **

1 2 3 5 6 7 8 9 10 11 12

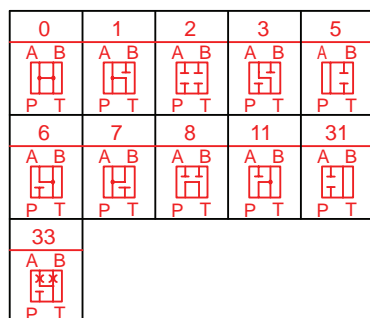
1 DIRECTIONAL CONTROL VALVE

2 MANIFOLD OR SUBPLATE MOUNTING

3 NOMINAL VALVE SIZE:

Nominal valve size: NG 16, CETOP 7 and ISO 4401-07

5 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)
- 31: Closed center (P, A)
- 33: Closed center (bleed AB)

6 SPRING ARRANGEMENT

- 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 COIL IDENTIFICATION

A1: AC110V, 50Hz/AC120V, 60Hz

R1: AC110V,50/60Hz; Rectifier built-in type

A2: AC220V, 50Hz/AC240V, 60Hz;

R2: AC220V, 50/60Hz; Rectifier built-in type

D1: DC12V

D2: DC24V

10 ELECTRICAL OPTIONS:

DN: DIN 43650 Coils

WB: Wiring housing with G1/2 thread and indicator lights

11 DESIGN NUMBER

70: Without indicator lights

71: With indicator lights

72: Without angled plug but with cap

12 OPTIONAL INQUIRY

SA: Stroke Adjustment on A Port

SB: Stroke Adjustment on B Port

SW: Stroke Adjustment on Both A & B Port

P: P Check

IFP DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG16/CETOP-07

SPOOL TYPES:

*(): Rexroth Model

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
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
Position type at neutral	Double solenoid valves, two-position (detented) -N-	Single solenoid valves, solenoid at port A end	Single solenoid valves, solenoid at -AL-
0	/	DG07-0A 	DG07-0AL
2		DG07-2A 	DG07-2AL

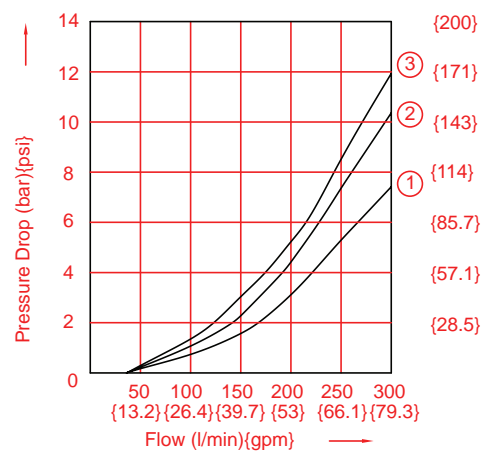
IIFP DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG16/CETOP-07

PERFORMANCE FIGURES & CURVES: Pressure Drop Curve Reference Chart Viscosity of Hydraulic Fluid: 41 mm²/s

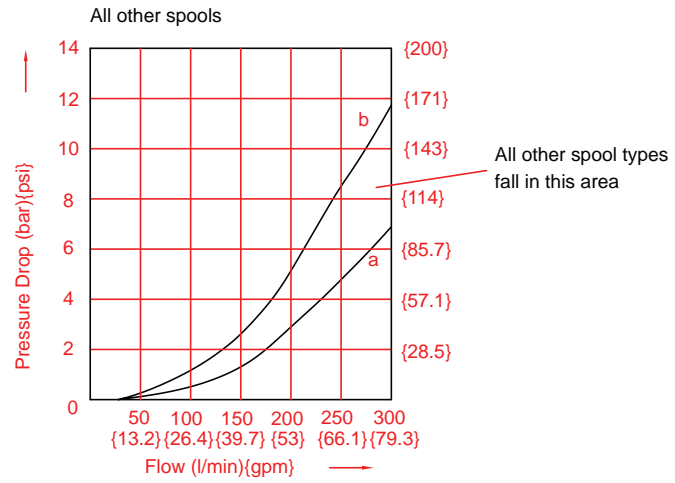
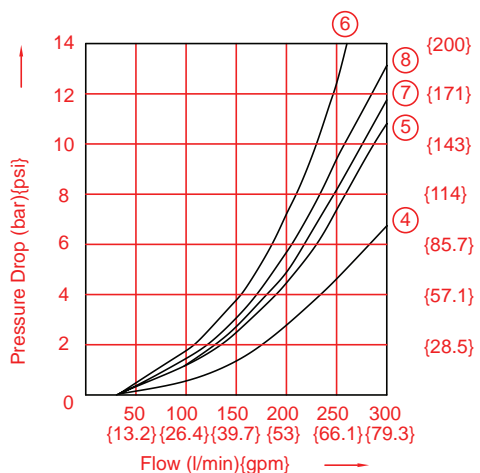
Spool Type	Pressure Drop Characteristics				
	P→A	P→B	A→T	B→T	P→T
0C	a-b	a-b	a-b	a-b	a-b
1C	a-b	a-b	a-b	a-b	a-b
2C	1	1	2	3	-
3C	a-b	a-b	a-b	a-b	a-b
6C	a-b	a-b	a-b	a-b	a-b
7C	a-b	a-b	a-b	a-b	a-b
8C	4	5	7	8	6
11C	a-b	a-b	a-b	a-b	a-b
31C	a-b	a-b	a-b	a-b	a-b
33C	a-b	a-b	a-b	a-b	a-b
0A	a-b	a-b	a-b	a-b	a-b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

DG07 SIZE 16

■ DG07-2C-**-72



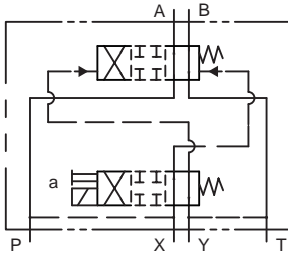
■ DG07-8C-**-72



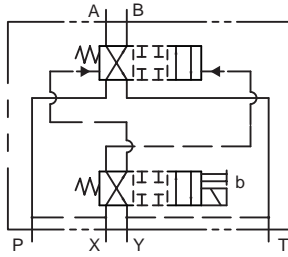
IFP DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG16 /CETOP07

DIMENSIONS:

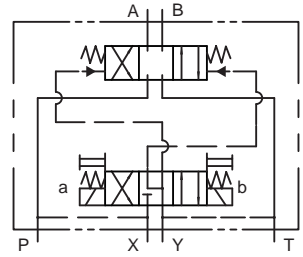
■ DG07-E-2A-T-**-**
 (*A)



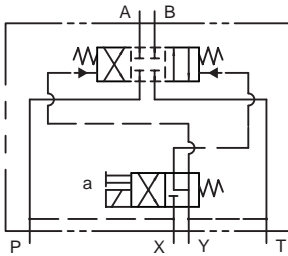
■ DG07-E-2AL-T-**-**
 (*AL)



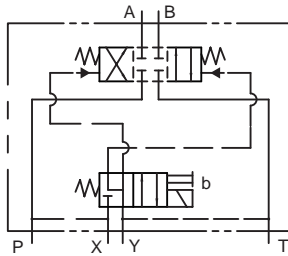
■ DG07-E-*C-T-**-**



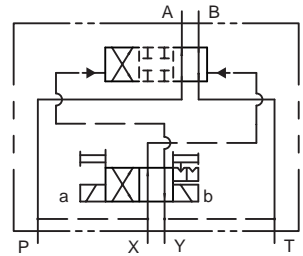
■ DG07-E-2B-T-**-**
 (*B)



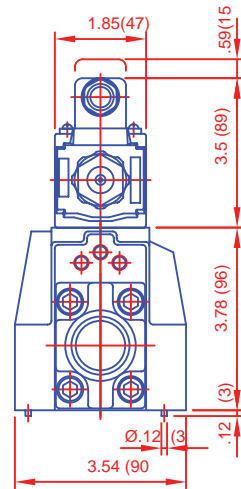
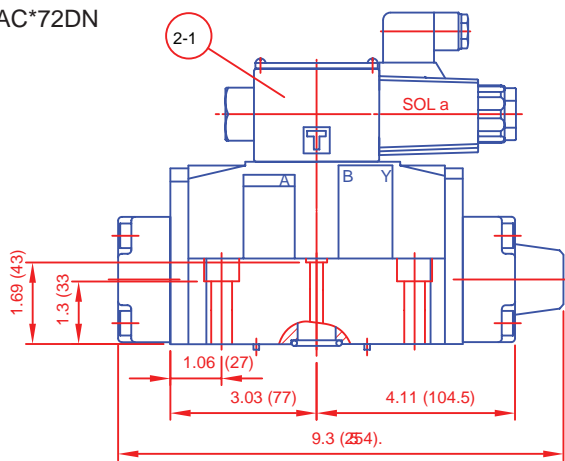
■ DG07-E-2BL-T-**-**
 (*BL)



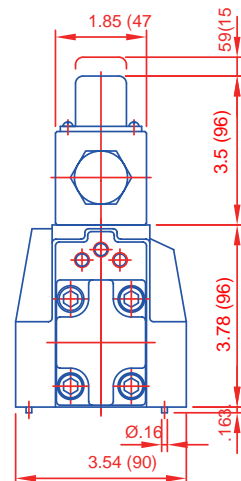
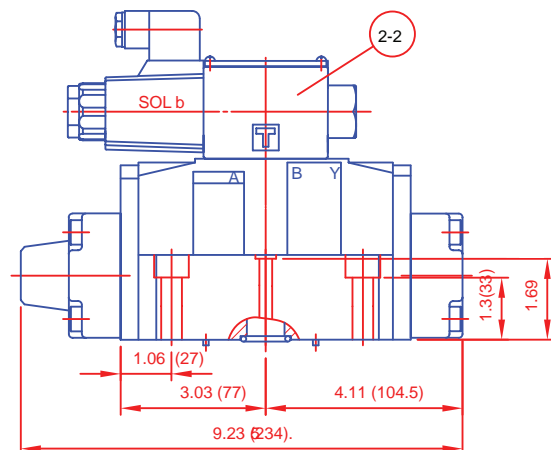
■ DG07-E-2N-T-**-**
 (*N)



■ DG07-E-*A AC*72DN
 *B



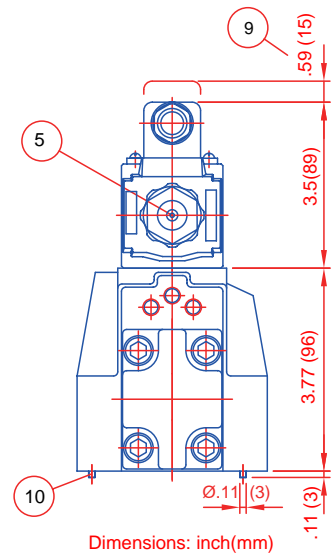
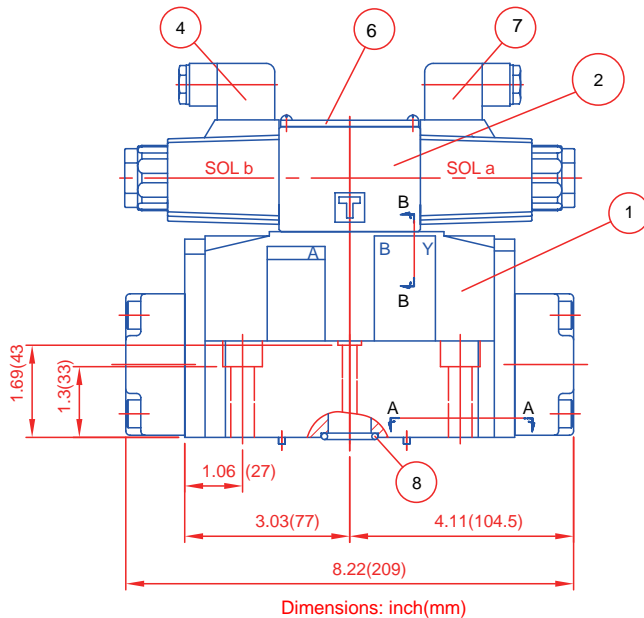
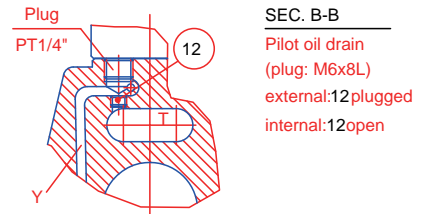
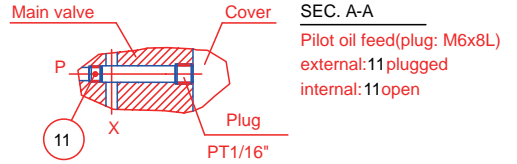
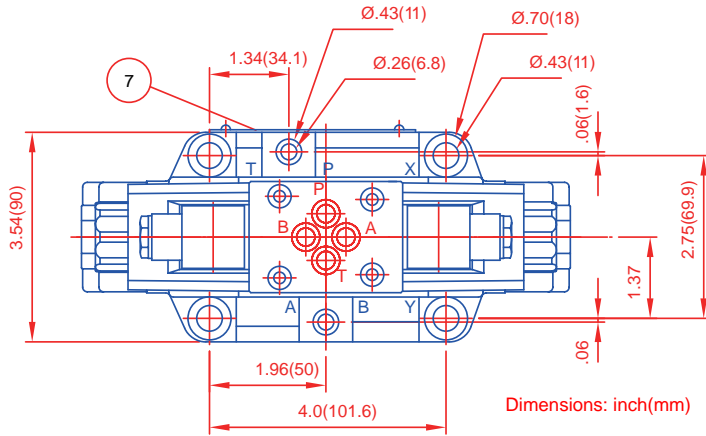
■ DG07-E-*AL-AC*-72DN
 *BL



IFF DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG16/CETOP07

DIMENSIONS:

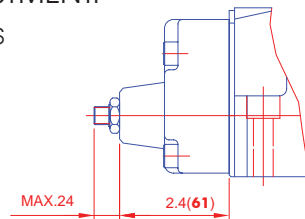
■ DG07-E-*C AC* 72DN



- 1: Main valve
- 2: Pilot valve
 - 2-1: Pilot valve DG03-2A-* (1 solenoid) for main valves with spools *A, *B (3 position valve with solenoid on side a)
 - 2-2: Pilot valve DG03-2AL-* (1 solenoid) for main valves with spools *AL, *BL (3 position valve with solenoid on side b)
 - 2-3: Pilot valve DG03-6C-* (2 solenoid) for main valves with 3 positions
- 3: Solenoid a, color of plug: grey
- 4: Solenoid b, color of plug: black
- 5: Push pin for manual operation
- 6: Nameplate for pilot valve
- 7: Nameplate for whole valve
- 8: O-ring:
 - Ports A,B,P,T: AS568-118 (NBR,Hs90);
 - Ports X,Y: AS568-013 (NBR,Hs90)
- 9: Space required to remove plug
- 10: Locating pin

STROKE ADJUSTMENT:

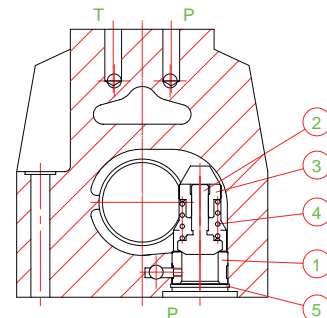
■ DG07-E-*-*-*70-S



P CHECK

■ DG07-E-*-*-*70-P

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

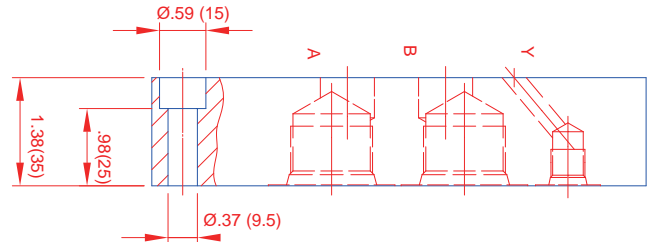
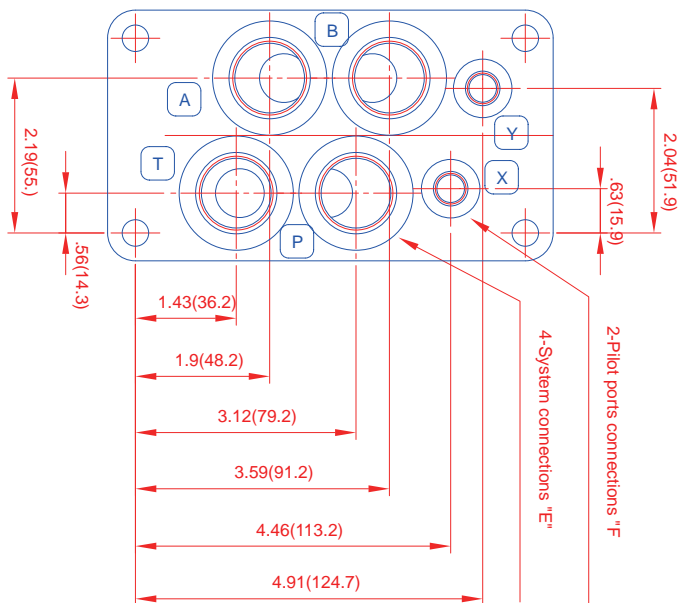
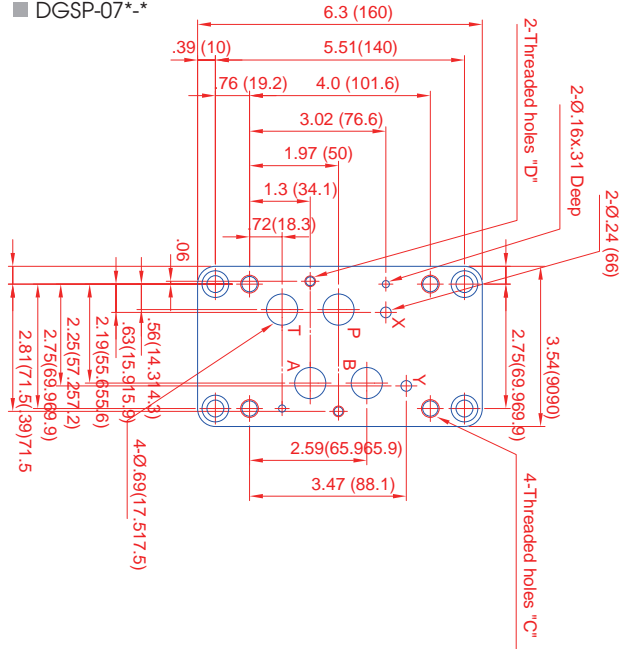


IFP DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG16/ CETOP-07

SUBPLATE DIMENSIONS:

Bottom Connection

■ DGSP-07*-*



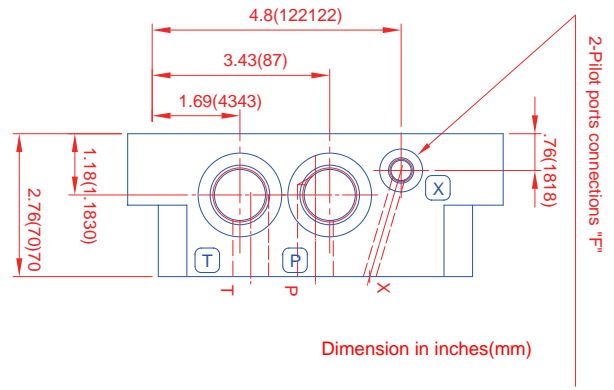
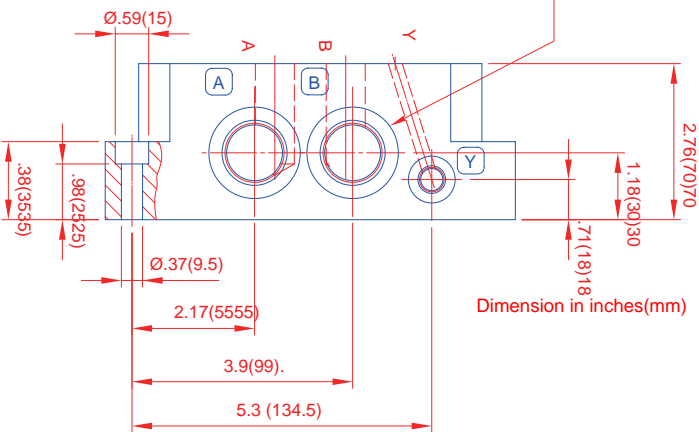
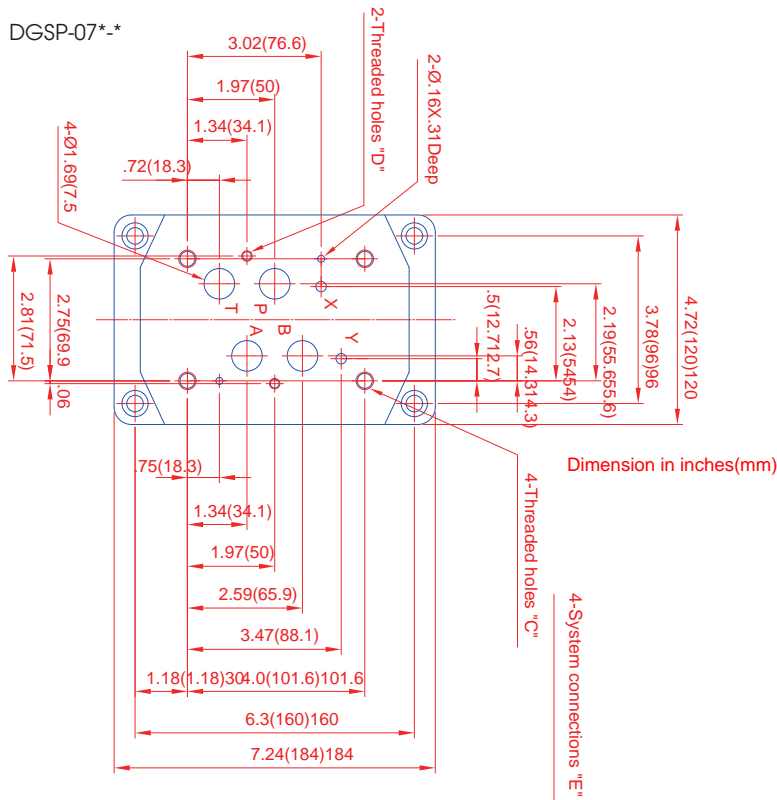
Model	C	D	E	F	Weight
DGSP-07-12	M10*19 Deep (Min)	M6*14 Deep (Min)	3/4"Rc	1/4"Rc	6.1LB / 2.8Kg
DGSP-07-16			1"Rc	1/4"Rc	6.1LB / 2.8Kg
DGSP-07G-12			3/4"BSP	1/4"BSP	6.1LB / 2.8Kg
DGSP-07G-16			1"BSP	1/4"BSP	6.1LB / 2.8Kg
DGSP-07N-12	3/8"-16 UNC-2B	1/4"-20 UNC-2B	3/4"NPT	1/4"NPT	6.1LB / 2.8Kg
DGSP-07N-16			1"NPT	1/4"NPT	6.1LB / 2.8Kg
DGSP-07S-12			3/4"SAE	1/4"SAE	6.1LB / 2.8Kg
DGSP-07S-16	Thd. *3/4" Deep	Thd. *9/16" Deep	1"SAE	1/4"SAE	6.1LB / 2.8Kg

IFP DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG16/CETOP-07

SUBPLATE DIMENSIONS:

Side Connection

DGSP-07*-*



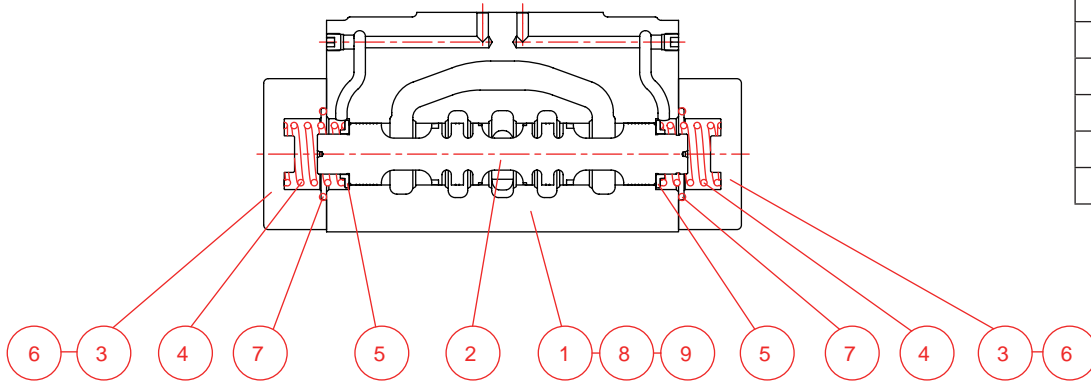
Model	C	D	E	F	Weight
DGSP-07-12E	M10*19 Deep(min)	M6*14 Deep(min)	3/4"Rc	1/4"Rc	8.3 Lbs/3.8Kgs
DGSP-07-16E			1"Rc	1/4"Rc	8.3 Lbs/3.8Kgs
DGSP-07G-12E			3/4"BSP	1/4"BSP	8.3 Lbs/3.8Kgs
DGSP-07G-16E			1"BSP	1/4"BSP	8.3 Lbs/3.8Kgs
DGSP-07N-12E	3/8"-16 UNC-2B Thd. x3/4" Deep	1/4"-20 UNC-2B Thd. x9/16" Deep	3/4"NPT	1/4"NPT	8.3 Lbs/3.8Kgs
DGSP-07N-16E			1"NPT	1/4"NPT	8.3 Lbs/3.8Kgs
DGSP-07S-16E			1"SAE	1/4"SAE	8.3 Lbs/3.8Kgs

IFP DG07 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG16/CETOP07

CROSS SECTION DRAWING

■ DG07-E1-2C-T-A

No.	Parts Name
1	Body
2	Spool
3	Cover
4	Spring
5	Washer
6	Screw
7	O Ring
8	O Ring
9	O Ring



Parts No.	Parts Name	Specification	Port	Q'ty
7	O Ring	G35 N90		2
8	O Ring	AS568-013 N90	X, Y	2
9	O Ring	AS568-118 N90	A, B, P, T	4

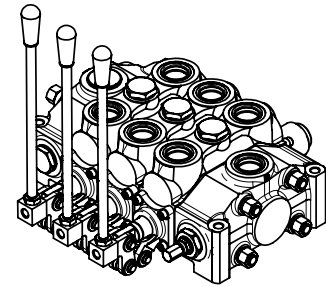
IIFP VCD100 / 100 GPM SECTIONAL VALVE



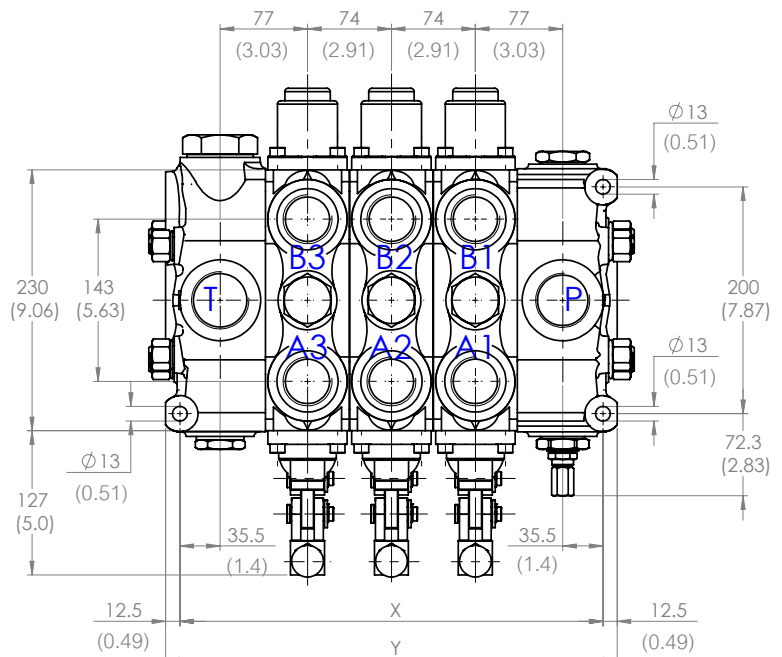
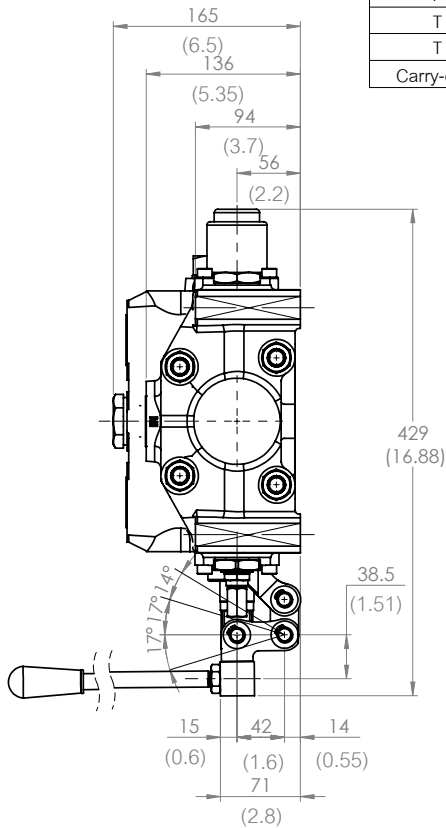
Standard working conditions

Max. recommended flow	380 l/min	(100 GPM)
Max. pressure	350 bar	(5100 PSI)
Max. backpressure	20 bar	(290 PSI)
Tie rod tightening torque	110 Nm	(81.13 lbf·ft)

Installation Dimensions mm. (inch)



AVAILABLE THREADS		
PORTS	BSP	SAE
A-B	G 1"1/4	SAE 20
P	G 1"1/4	SAE 20
T	G 1"1/2	SAE 20
T	G 1"1/2	SAE 20
Carry-over	G 1"1/2	SAE 20



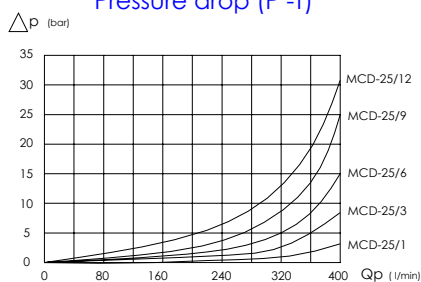
Variable Dimension

Type	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
X(mm)	225	299	373	447	521	595	669	743	817	891	965	1039
X(in)	8.9	11.8	14.7	17.6	20.5	23.4	25.6	28.5	31.4	34.3	37.2	40.1
Y(mm)	250	324	398	472	546	620	694	768	842	916	990	1064
Y(in)	9.84	12.8	15.7	18.6	21.5	24.4	27.3	30.2	33.1	36.1	38.9	41.8

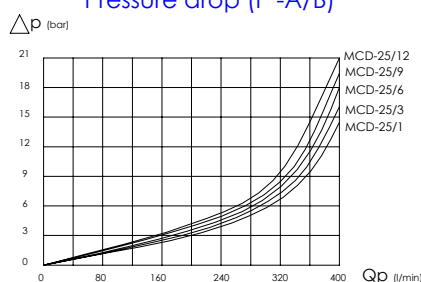
Weights

Type	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
Kg.	40.4	55.8	71.2	86.6	102	117.4	132.8	148.2	163.6	179	194.4	209.8
lb	89.06	123.0	156.9	190.9	224.8	258.8	292.7	326.7	360.6	394.6	428.5	462.5

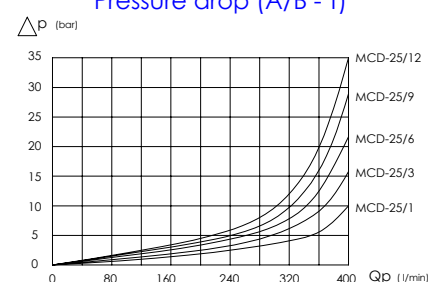
Pressure drop (P - T)



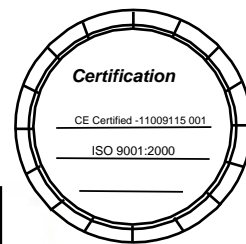
Pressure drop (P - A/B)



Pressure drop (A/B - T)



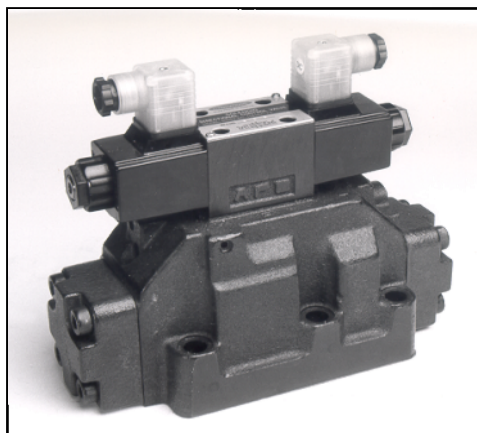
IFP DG08 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG22/CETOP08



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

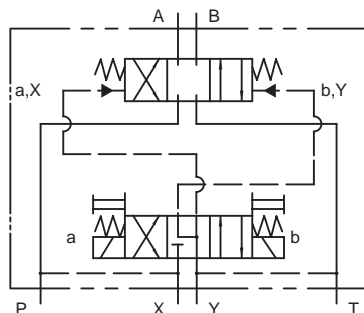


SPECIFICATION :

Maximum Flow Rate	119 GPM (450 L/Min)	
Maximum Operating Pressure	4500 PSI (320 Bar)	
Maximum Permissible Back Pressure	2285 PSI (160 Bar)	
Pilot Pressure	159~300 PSI (11~210 Bar)	
Ambient Temperature Range	5°F~122°F (-15 °C~50 °C)	
Hydraulic Fluid Temperature	5 °F~158°F (-15 °C~70 °C)	
Viscosity Range	15~400 ² /S	
Hydraulic Oil	ISO VG 32,46,68	
Fluid Cleanliness	NAS Class 9 max	
Maximum change over frequency	120 times/min	
Mounting Pattern	ISO 4401-AE-08-4-A	
Approx. Weight (Valve with hydraulic operation)	26.4Lbs (12.5 Kgs)	
Valve Fixing Screws	Metric	M12*60l (6 pcs)
	Inch	1/2"~13UNCx2-1/4"L (6 pcs)
Tightening Torque	885-1079 in/lbs (100~122.5 Nm)	

GRAPHIC SYMBOL :

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



IIFP DG08 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG22 /CETOP08

ORDERING CODE :

DG 08 - 2C- ET-115VAC -72-DN-**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

1 DIRECTIONAL CONTROL VALVE

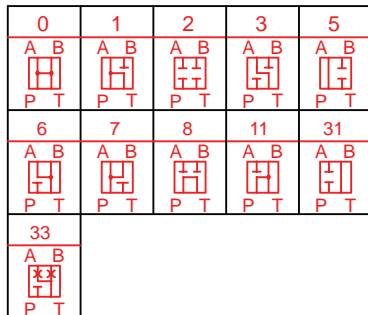
2 MANIFOLD OR SUBPLATE MOUNTING

3 NOMINAL VALVE SIZE:

NG 22, CETOP 8 and ISO 4401-08

4 OPERATOR

5 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)
- 31: Closed center (P, A)
- 33: Closed center (bleed AB)

6 SPRING ARRANGEMENT

- 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 COIL IDENTIFICATION

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

10 DESIGN NUMBER

: 72

11 ELECTRICAL OPTIONS

DN: DiN 43650 Coils

WB: Wiring housing with G1/2 thread and indicator lights

12 OPTIONAL INQUIRY

SA: Stroke Adjustment on A Port

SB: Stroke Adjustment on B Port

SW: Stroke Adjustment on Both A & B Port

P: P Check

IFP DG08 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG22/CETOP08

SPOOL TYPES:

*Q: Rexroth Model

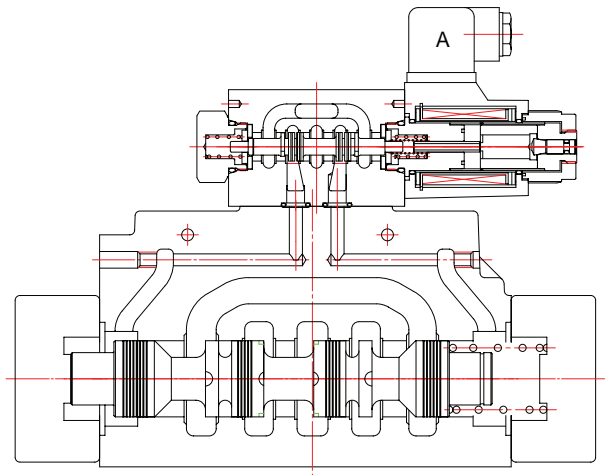
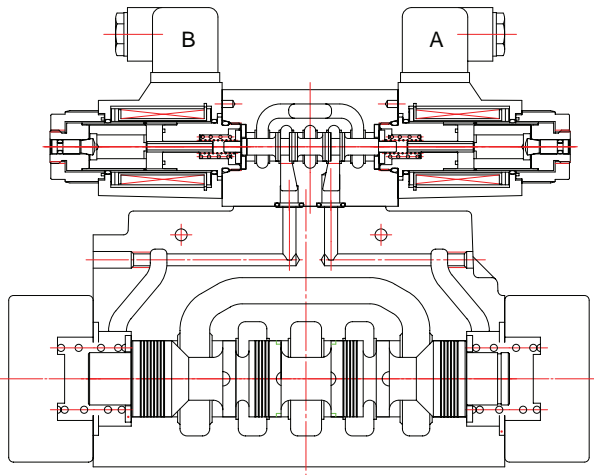
Position type at neutral	Double solenoid valves, spring centered -C-	Single solenoid valves, solenoid at port A end -B-	Single solenoid valves, solenoid at port B end -BL-
0 (H)	DG08-0C 	DG08-0B 	DG08-0BL
1 (F)	DG08-1C 	DG08-1B 	DG08-1BL
2 (E)	DG08-2C 	DG08-2B 	DG08-2BL
3 (L)	DG08-3C 	DG08-3B 	DG08-3BL
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
Position type at neutral	Double solenoid valves, two-position (detented) -N-	Single solenoid valves, solenoid at port A end -A-	Single solenoid valves, solenoid at port A end -AL-
0 (H)	/	DG08-0A 	DG08-0AL
2 (E)		DG08-2A 	DG08-2AL

**IFP DG08 SOLENOID CONTROLLED
 PILOT OPERATED DIRECTIONAL VALVE SIZE NG22/CETOP08**

CROSS SECTION DIAGRAM:

■ DG08-2C - AC* 72DN

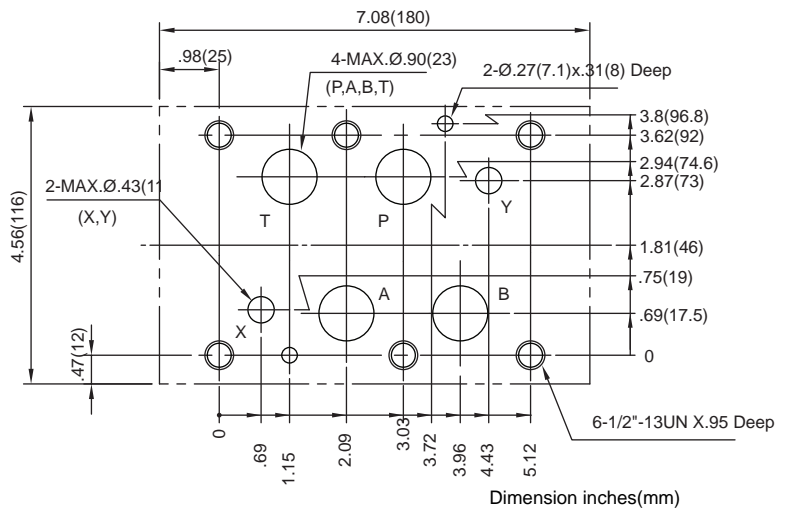
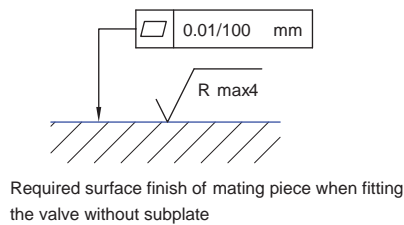
■ DG08-2A - AC* 72DN



INSTALLATION DIMENSIONS:

(Machined valve mounting face with position of ports)

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



IFP DG08 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG22/CETOP08

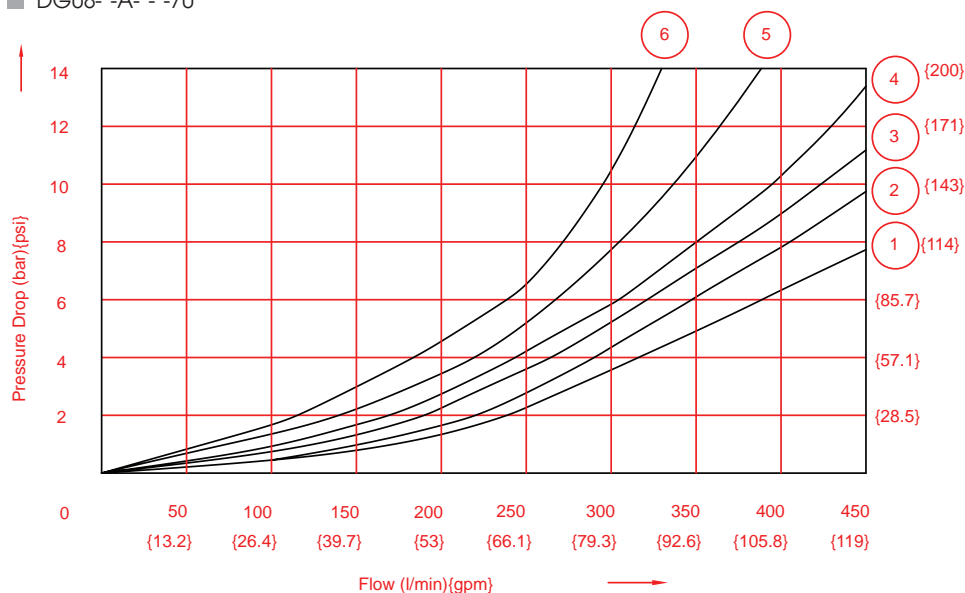
PERFORMANCE FIGURES & CURVES:

Pressure Drop Curve Reference Chart

Viscosity of Hydraulic Fluid: 41 mm²/s

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

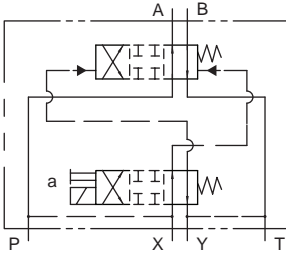
■ DG08*-A**-70



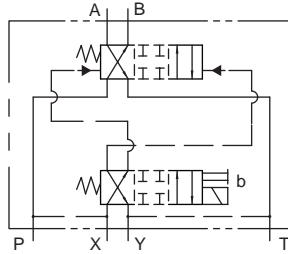
IFP DG08 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG22/CETOP08

DIMENSIONS:

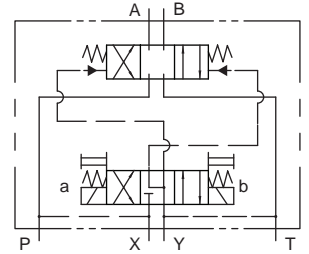
■ DG08-E-2A-T-**-**
 (*A)



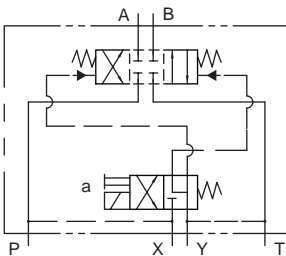
■ DG08-E-2AL-T-**-**
 (*AL)



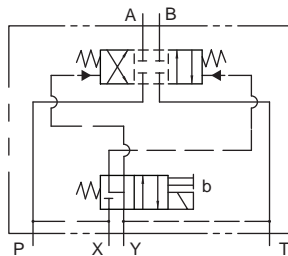
■ DG08-E-*C-T-**-**



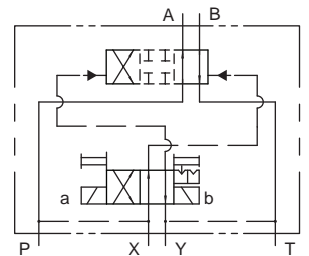
■ DG08-E-2B-T-**-**
 (*B)



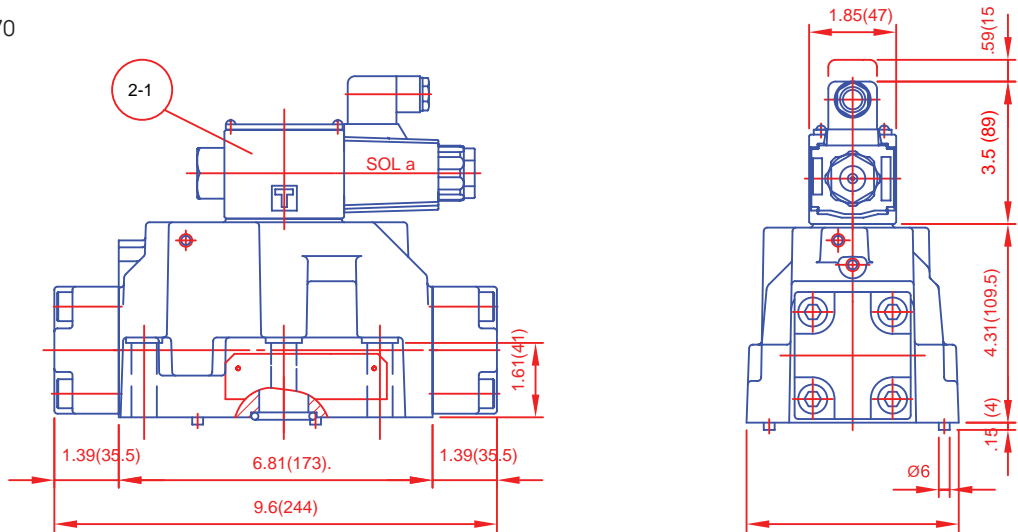
■ DG08-E-2BL-T-**-**
 (*BL)



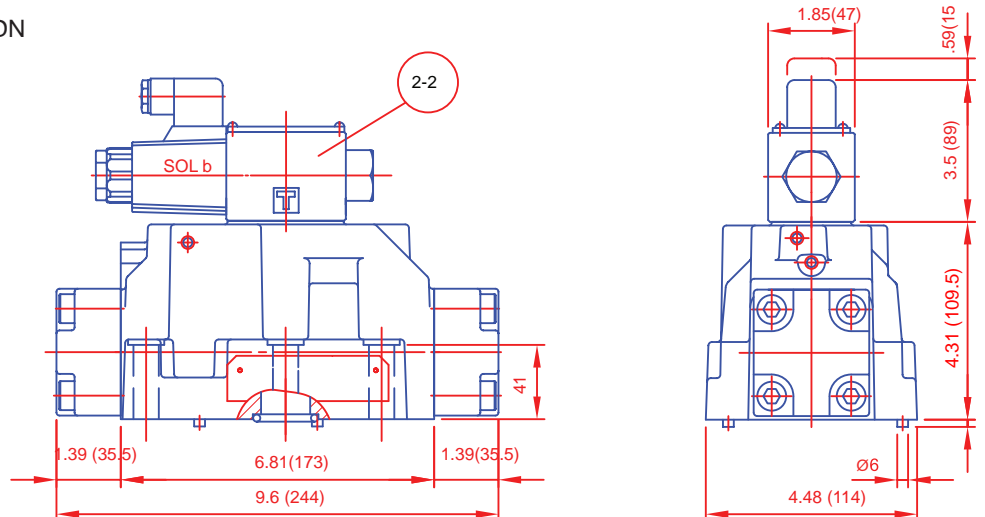
■ DG08-E-*N-T-**-**



■ DG08-E-*A-A*-DN-70
 *B



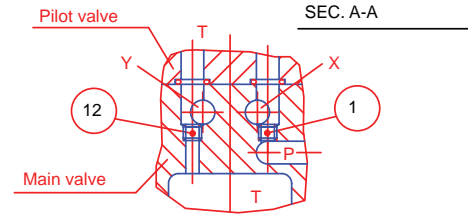
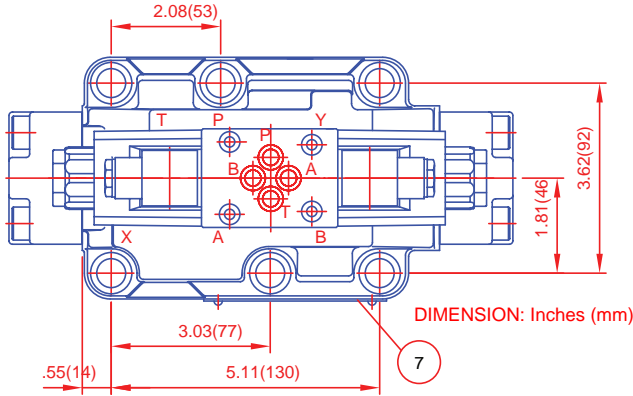
■ DG08-E-*AL AC* 72DN
 *BL



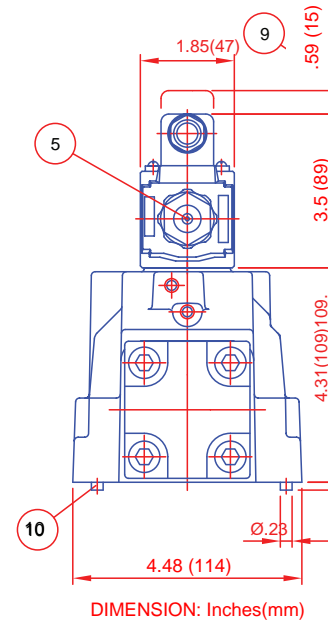
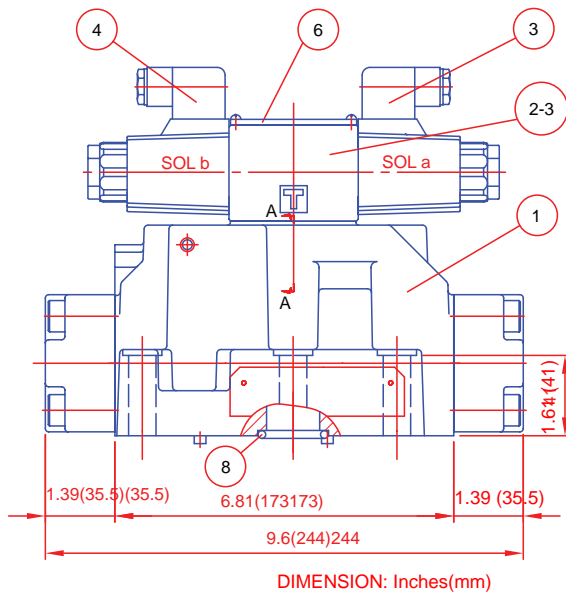
IFP DG08 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG22 /CETOP08

DIMENSIONS:

■ DG08-E-*C-AC* 72DN



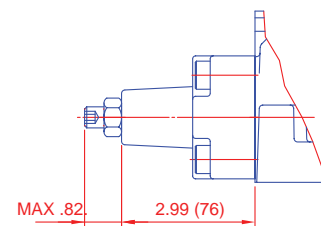
Pilot oil feed(plug: M6x8L)
 external: 11 plugged
 internal: 11 open
 Pilot oil drain(plug: M
 external: 12 plugged
 internal: 12 open



- 1: Main valve
- 2: Pilot valve
 - 2-1: Pilot valve DG03-2A-* (1 solenoid) for main valves with spools *A, *B (3 position valve with solenoid on side a)
 - 2-2: Pilot valve DG03-2AL-* (1 solenoid) for main valves with spools *AL, *BL (3 position valve with solenoid on side b)
 - 2-3: Pilot valve DG03-6C-* (2 solenoid) for main valves with 3 positions
- 3: Solenoid a, color of plug: grey
- 4: Solenoid b, color of plug: black
- 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

STROKE ADJUSTMENT:

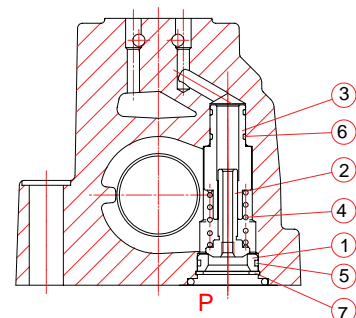
■ DG07-E-*-*-70-S



P CHECK

■ DG08-E-*-*-70-P

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

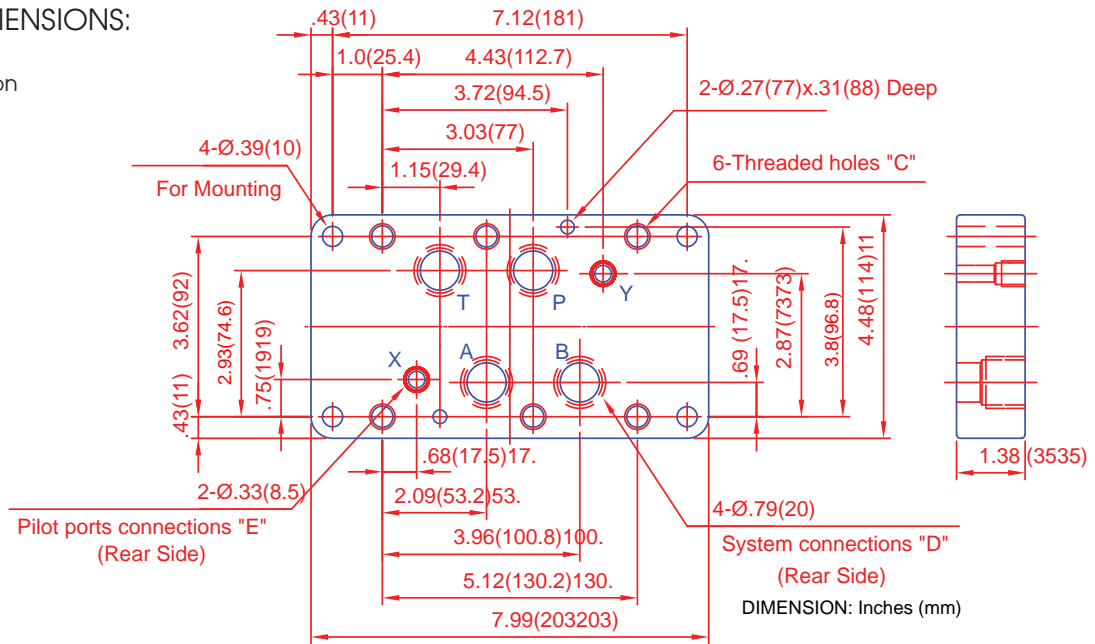


IFP DG08 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG22/CETOP08

SUBPLATE DIMENSIONS:

Bottom Connection

■ DGSP-08*-*

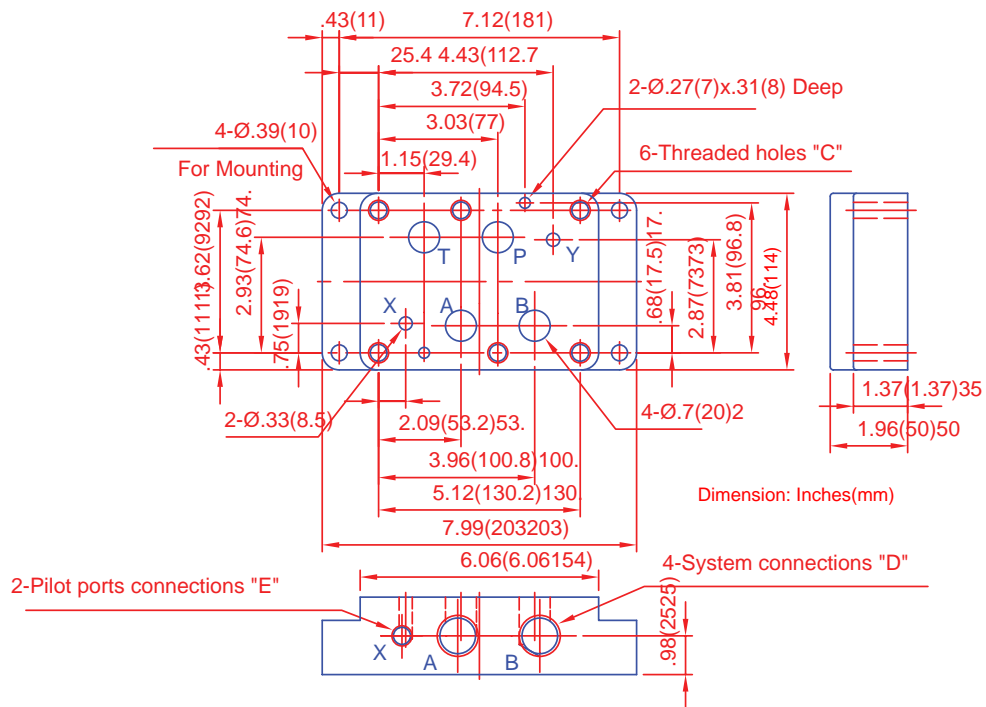


Model	C	D	E	Weight
DGSP-08-12	M12x25 Deep(min) full thread depth	3/4"Rc	1/4"Rc	10.5Lbs (4.8Kg)
DGSP-08-16		1"Rc	1/4"Rc	
DGSP-08G-12		3/4"BSP	1/4"BSP	10.5Lbs (4.8Kg)
DGSP-08G-16		1"BSP	1/4"BSP	

Model	C	D	E	Weight
DGSP-08N-12	1/2"-13UNC-2B Thd.x1" Deep full thread depth	3/4"NPT	1/4"NPT	10.5Lbs (4.8Kg)
DGSP-08N-16		1"NPT	1/4"NPT	
DGSP-08S-12		3/4"SAE	1/4"SAE	10.5Lbs (4.8Kg)
DGSP-08S-16		1"SAE	1/4"SAE	

Side Connection

■ DGSP-08*-*E



Model	C	D	E	Weight
DGSP-08-12E	M12x25 Deep(min) full thread depth	3/4"Rc	1/4"Rc	10.5Lbs (6.4Kg)
DGSP-08-16E		1"Rc	1/4"Rc	
DGSP-08G-12E		3/4"BSP	1/4"BSP	10.5Lbs (6.4Kg)
DGSP-08G-16E		1"BSP	1/4"BSP	

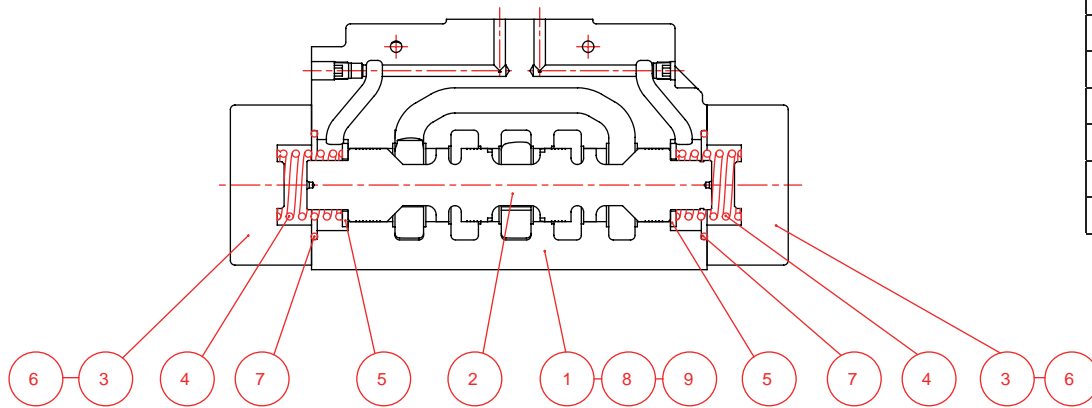
Model	C	D	E	Weight
DGSP-08N-12E	1/2"-13UNC-2B Thd/*1" Deep full thread depth	3/4"NPT	1/4" NPT	10.5Lbs (6.4Kg)
DGSP-08N-16E		1" NPT	1/4" NPT	
DGSP-08S-12E		3/4"SAE	1/4"SAE	10.5Lbs (6.4Kg)
DGSP-08S-16E		1"SAE	1/4"SAE	

IFP DG08 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG22/CETOP08

CROSS SECTION DRAWING

■ DG08-E1-2C-T-A

No.	Parts Name
1	Body
2	Spool
3	Cover
4	Spring
5	Washer
6	Screw
7	O Ring
8	O Ring
9	O Ring



Parts No.	Parts Name	Specification	Port	Q'ty
7	O Ring	42*48.2*3		2
8	O Ring	AS568-210 N90	X, Y	2
9	O Ring	AS568-215 N90	A, B, P, T	4

IFP DG10 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG32/CETOP10



FEATURES :

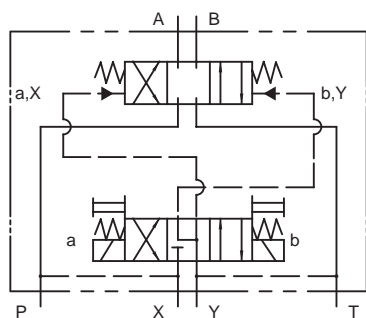
- Highest performance in NG 32
- Optimized spool design to reduce flow force
- Proven quality through 10 million endurance test
- Manual overrides standard
- P port pilot pressure insert for open center spools
- Connections to DIN, ISO and CETOP



SPECIFICATION :

Maximum Flow Rate	211 GPM (800 L/min)	
Maximum Operating Pressure	3575 PSI (250 Bar)	
Maximum Permissible Back Pressure	2285 PSI (160 Bar)	
Pilot Pressure	159-300 PSI (12~210 Bar)	
Ambient Temperature Range	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	
Maximum change over frequency	120 times/min	
Mounting Pattern	ISO 4401-AF-10-4-A	
Approx. Weight (Valve with hydraulic operation)	95 Lbs(43.0 Kgs)	
Valve Fixing Screws	Metric	M20*60L(6 pcs)
	Inch	3/4"~10UNCx2-1/2"L*6 pcs
Tightening Torque	650~795 Ft/Lbs(230~290 Nm)	

GRAPHIC SYMBOL :



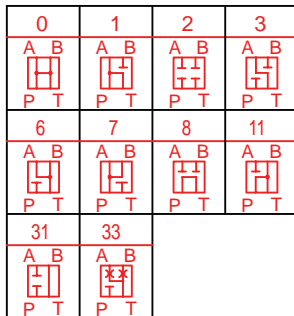
IFF DG10 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG32/CETOP10

ORDERING CODE :

D G 10 - 2 C -ET-115VAC-72 -DN - **

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 32 CETOP-10 and ISO 4401-10
- 4** OPERATOR
No code: Hydraulic (pilot) operation
E: Electro-hydraulic operation
- 5** 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)
- 31: Closed center (P, A)
- 33: Closed center (bleed AB)

6 SPRING ARRANGEMENT

- 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 COIL IDENTIFICATION

- 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
- 24VCD: DC24V

10 DESIGN NUMBER

: 72

11 DESIGN NUMBER

- DN: DIN 43650 Coils
- WB: Wiring housing with G1/2 thread and indicator lights

12 OPTIONAL INQUIRY

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

IFP DG10 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG32/CETOP10

SPOOL TYPES:

*(): Rexroth Model

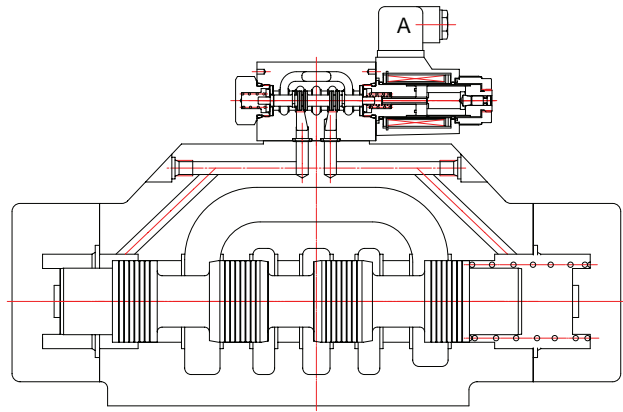
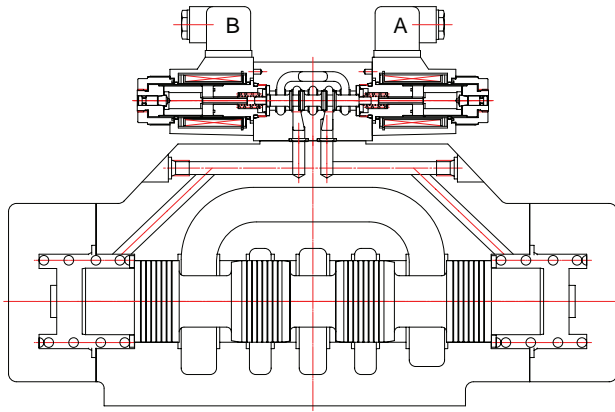
Position type at neutral	Double solenoid valves, spring centered -C-	Single solenoid valves, solenoid at port A end -B-	Single solenoid valves, solenoid at port B end -BL-
0 (H)	DG10-0C 	DG10-0B 	DG10-0BL
1 (F)	DG10-1C 	DG10-1B 	DG10-1BL
2 (E)	DG10-2C 	DG10-2B 	DG10-2BL
3 (L)	DG10-3C 	DG10-3B 	DG10-3BL
6 (J)	DG10-6C 	DG10-6B 	DG10-6BL
7 (M)	DG10-7C 	DG10-7B 	DG10-7 BL
8 (G)	DG10-8C 	DG10-8B 	DG10-8BL
11 (P)	DG10-11C 	DG10-11B 	DG10-11BL
31 (U)	DG10-31C 	DG10-31B 	DG10-31BL
33 (W)	DG10-33C 	DG10-33B 	DG10-33BL
Position type at neutral	Double solenoid valves, two-position (detented) -N-	Single solenoid valves, solenoid at port A end -A-	Single solenoid valves, solenoid at port A end -AL-
0 (H)	/	DG08H-0A 	DG08H-0AL
2 (E)		DG08H-2A 	DG08H-2AL

IFP DG10 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG32/CETOP10

CROSS SECTION DIAGRAM:

■ DG10-2C-AC*72DN

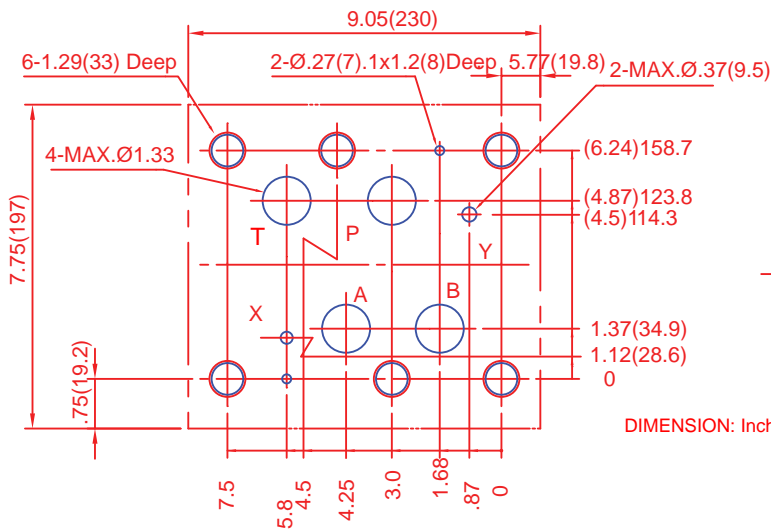
■ DG10-2A AC*72DN



INSTALLATION DIMENSIONS:

(Machined valve mounting face with position of ports)

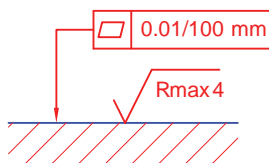
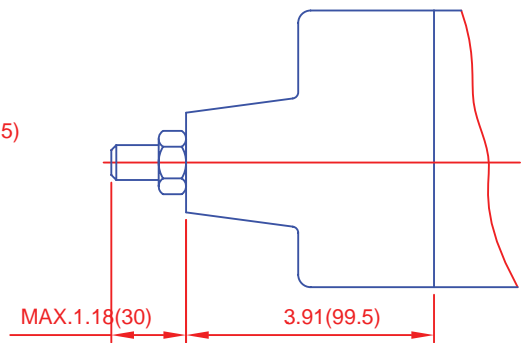
■ Mounting Surface: ISO 4401-AF-10-4-A



DIMENSION: Inches (mm)

STROKE ADJUSTMENT

■ DG10-E-*-*-70-S



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

IFP DG10 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG32/CETOP10

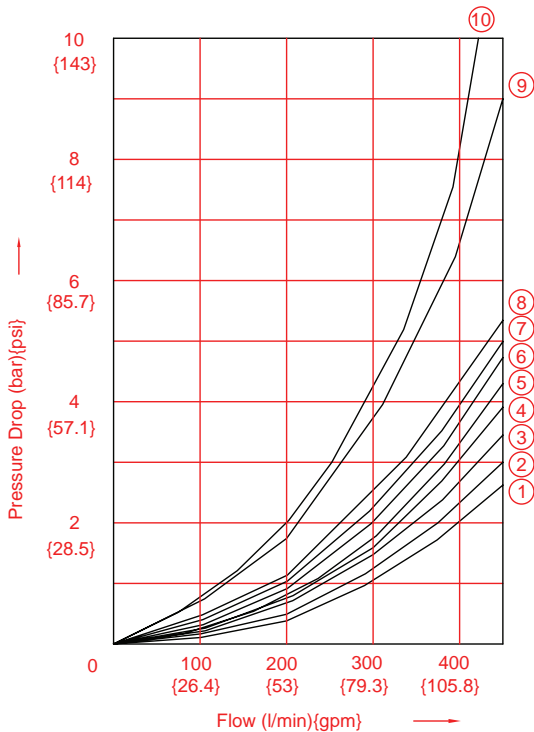
PERFORMANCE FIGURES & CURVES:

Pressure Drop Curve Reference Chart

Viscosity of Hydraulic Fluid: 20 mm²/s

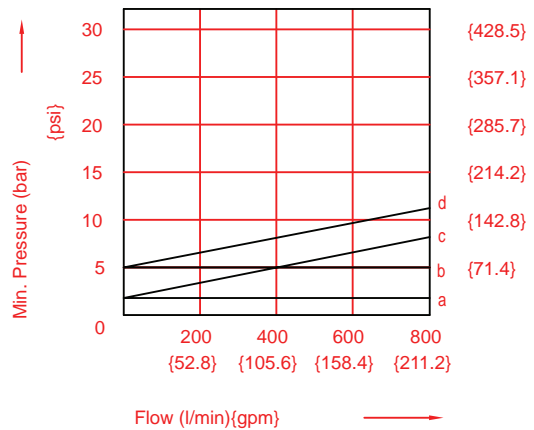
Spool Type	Pressure Drop Characteristics				
	P→A	P→B	A→T	B→T	P→T
0C	1	1	3	5	3
2C	2	2	4	6	-
3C / 31C	2	3	3	8	-
6C	2	2	3	4	-
8C	4	5	10	9	6
33C	2	2	6	6	-
0A	1	1	3	5	-
2A	2	2	4	6	-
6A	2	2	3	7	-

■ DG10-A-*-70



Min. Pressure V.S Flow Curve

■ DG10-*-A-*-70

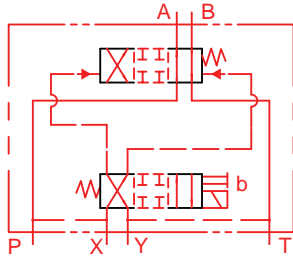


Spring	Spool	Curve
A, AL	0, 9	a
	2, 6	c
B, BL, C, N	0, 4, 8, 9	b
	2, 3, 6, 33	d

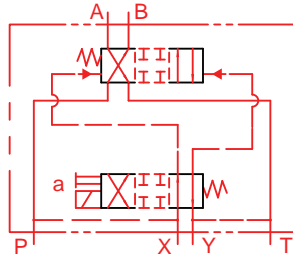
IFP DG10 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG32/CETOP10

DIMENSIONS:

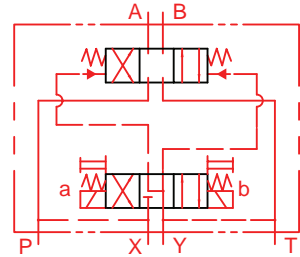
■ DG10-E-2A-T-**-**
 (*A)



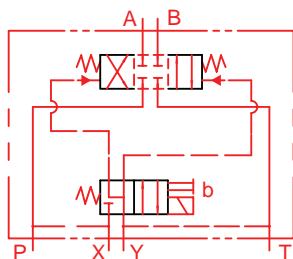
■ DG10-E-2ALT-T-**-**
 (*AL)



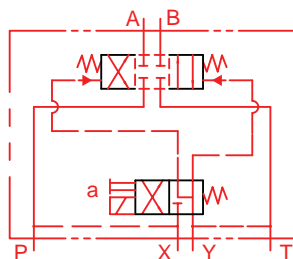
■ DG10-E-C-T-**-**



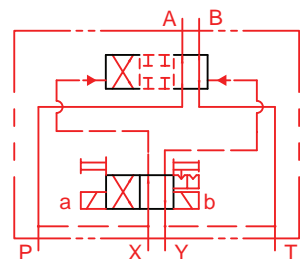
■ DG10-E-2B-T-**-**
 (*B)



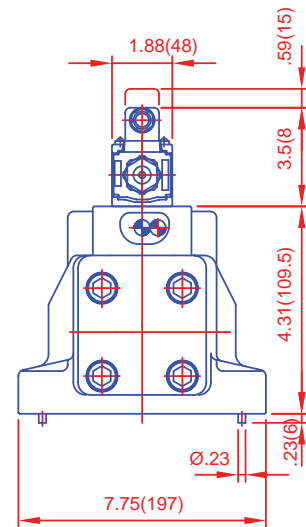
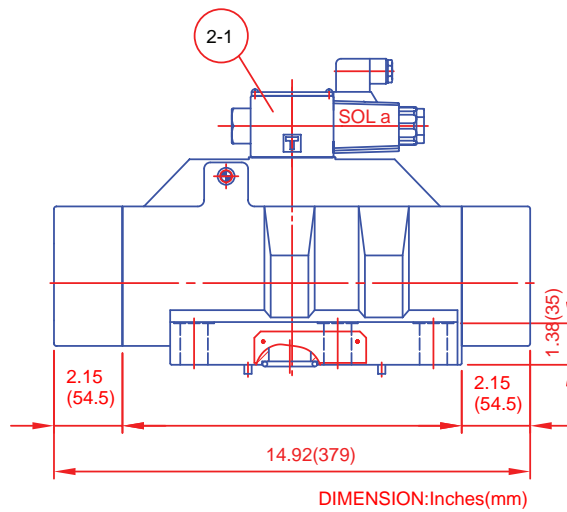
■ DG10-E-2BL-T-**-**
 (*BL)



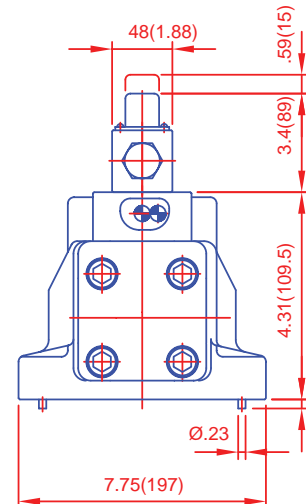
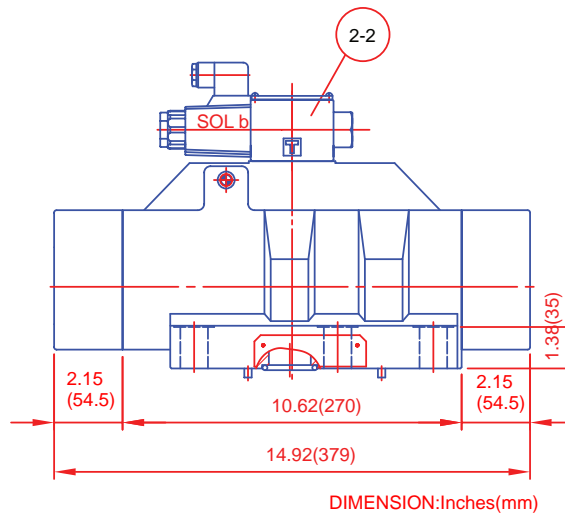
■ DG10-E-2N-T-**-**



■ DG10-E-*A AC* 72DN
 *B



■ DG10-E-*AL AC* 72DN
 * BL

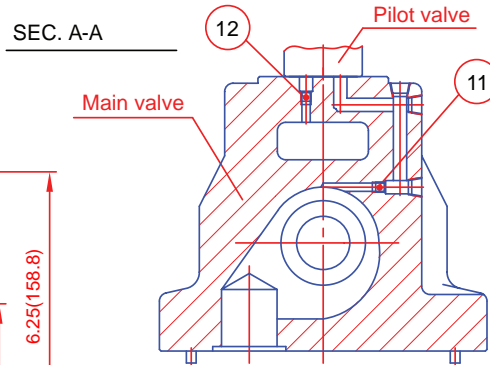
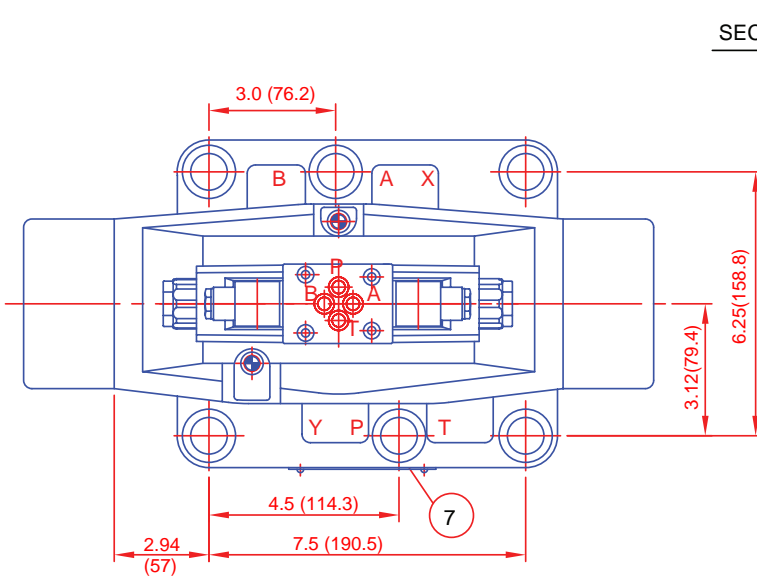


IFFP DG10 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG32 / CETOP10

DIMENSIONS:

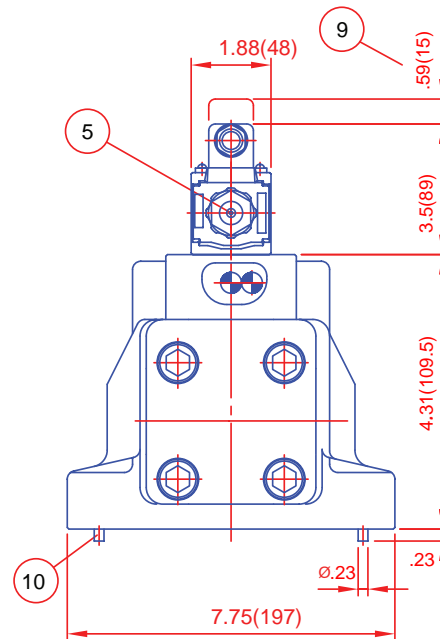
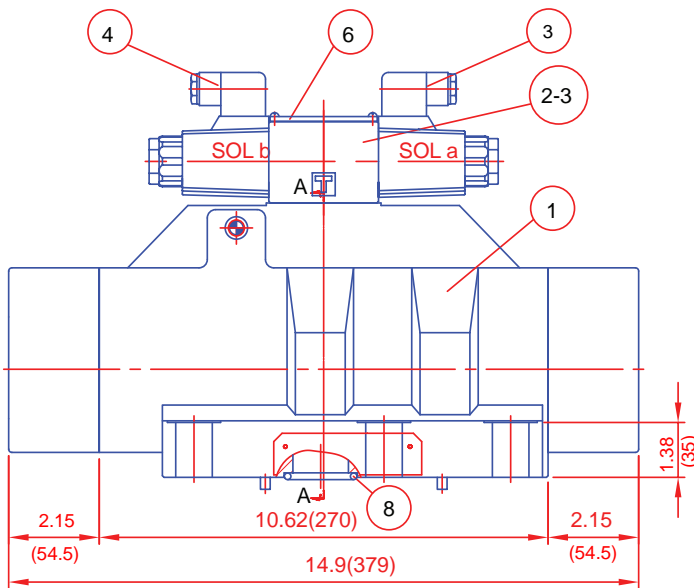
■ DG10-E-*C-A*-DN-70

DG10 SIZE 32



Pilot oil feed(plug: M6x8L)
external:11 plugged
internal:11 open

Pilot oil drain(plug: M6x8L)
external:12 plugged
internal:12 open

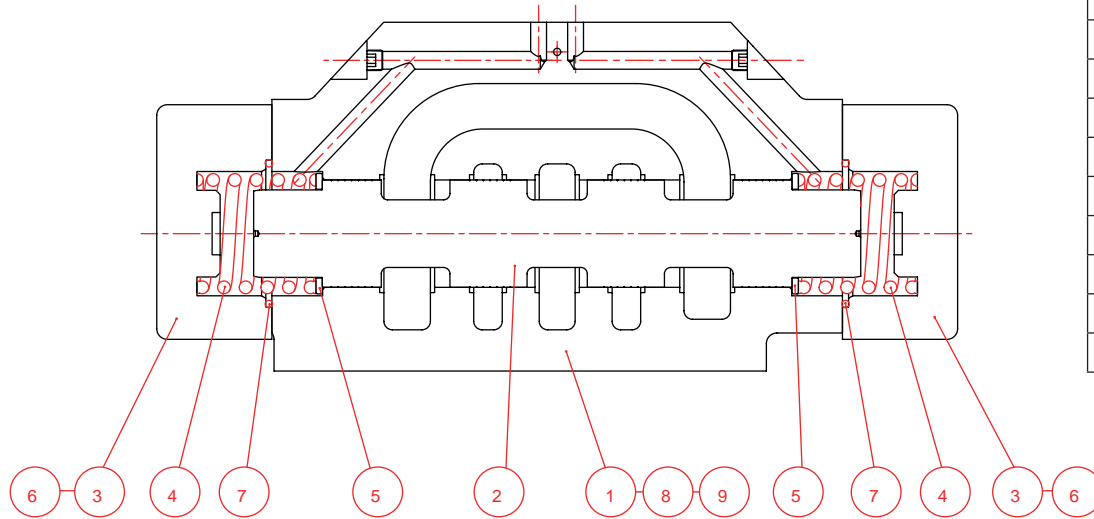


- 1: Main valve
- 2: Pilot valve
 - 2-1: Pilot valve DG03-2A-* (1 solenoid) for main valves with spools *A, *B (3 position valve with solenoid on side a)
 - 2-2: Pilot valve DG03-2AL-* (1 solenoid) for main valves with spools *AL, *BL (3 position valve with solenoid on side b)
 - 2-3: Pilot valve DG03-6C-* (2 solenoid) for main valves with 3 positions
- 3: Solenoid a, color of plug: grey
- 4: Solenoid b, color of plug: black
- 5: Push pin for manual operation
- 6: Nameplate for pilot valve
- 7: Nameplate for whole valve
- 8: O-ring:
 - Ports A,B,P,T: 1B-P38 (NBR,Hs90);
 - Ports X,Y: 1B-P24 (NBR,Hs90)
- 9: Space required to remove plug
- 10: Locating pin

IFP DG10 SOLENOID CONTROLLED PILOT OPERATED DIRECTIONAL VALVE SIZE NG32/CETOP10

CROSS SECTION DIAGRAM:

■ DG10-E1-2C-T-A



No.	Parts Name
1	Body
2	Spool
3	Cover
4	Spring
5	Washer
6	Screw
7	O Ring
8	O Ring
9	O Ring

Parts No.	Parts Name	Specification	Port	Q'ty
7	O Ring	AS568-230 N90		2
8	O Ring	P24 N90	X, Y	2
9	O Ring	P38 N90	A, B, P, T	4

IFP MD20 MANUALLY OPERATED MONOBLOCK VALVE



FEATURES

- * Adjustable Balanced Piston Relief Valve
- * Power Beyond / Closed Center Available
- * Integral Load Holding Check Valve
- * Optional Pilot Operated Check Valves
- * Single / Double acting & Motor spools
- * Spring Return or Detent



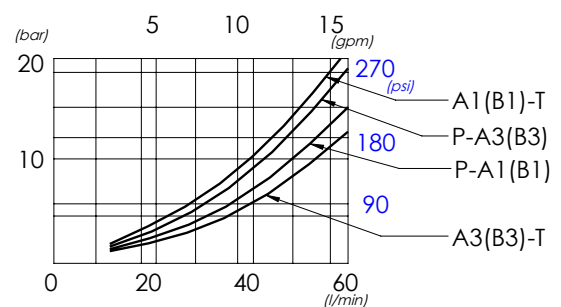
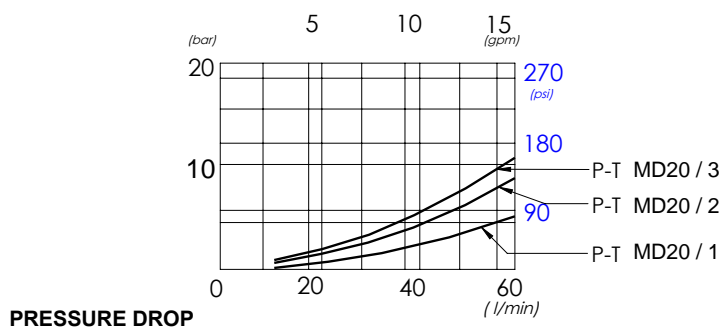
MD20 ORDERING CODE

IFP MD 20 1 C S D P 72

Monoblock Valve | **Valve Series** (50 = 30 GPM) | **Number of Spools** (1 = 1 Spool, 2 = 2 Spool, 3 = 3 Spool) | **Spool Type** (C = Double Acting, S = Single Acting, M = Motor Spool) | **Port Type** (S = SAE (Std), N = NPT, B = BSP) | **Spool Function** (No Code = Spring Return, D = Detent) | **Tank Port** (No Code = Open Center, C = Closed Center, P = Power Beyond) | **Design Number** (72)

Model	MD20
Maximum Flow	15 US gpm (56 l/min)
Recommended flow	12 US gpm (45 l/min)
Maximum Pressure	5000 PSI (350 bar)
Maximum Back Pressure	1160 PSI (80 bar)
Leakage @1500 PSI (100bar)	0.06 in ³ /min (1 cm ³ /min)
Weight MD20 -1	7.9 lbs (3.6 kg)
Weight MD20 -2	11.2 lbs (5.1 kg)
Weight MD20 -3	15.1 lbs (6.9 kg)

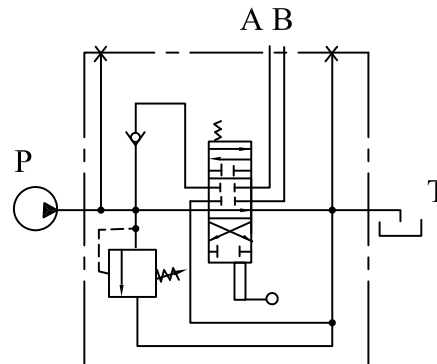
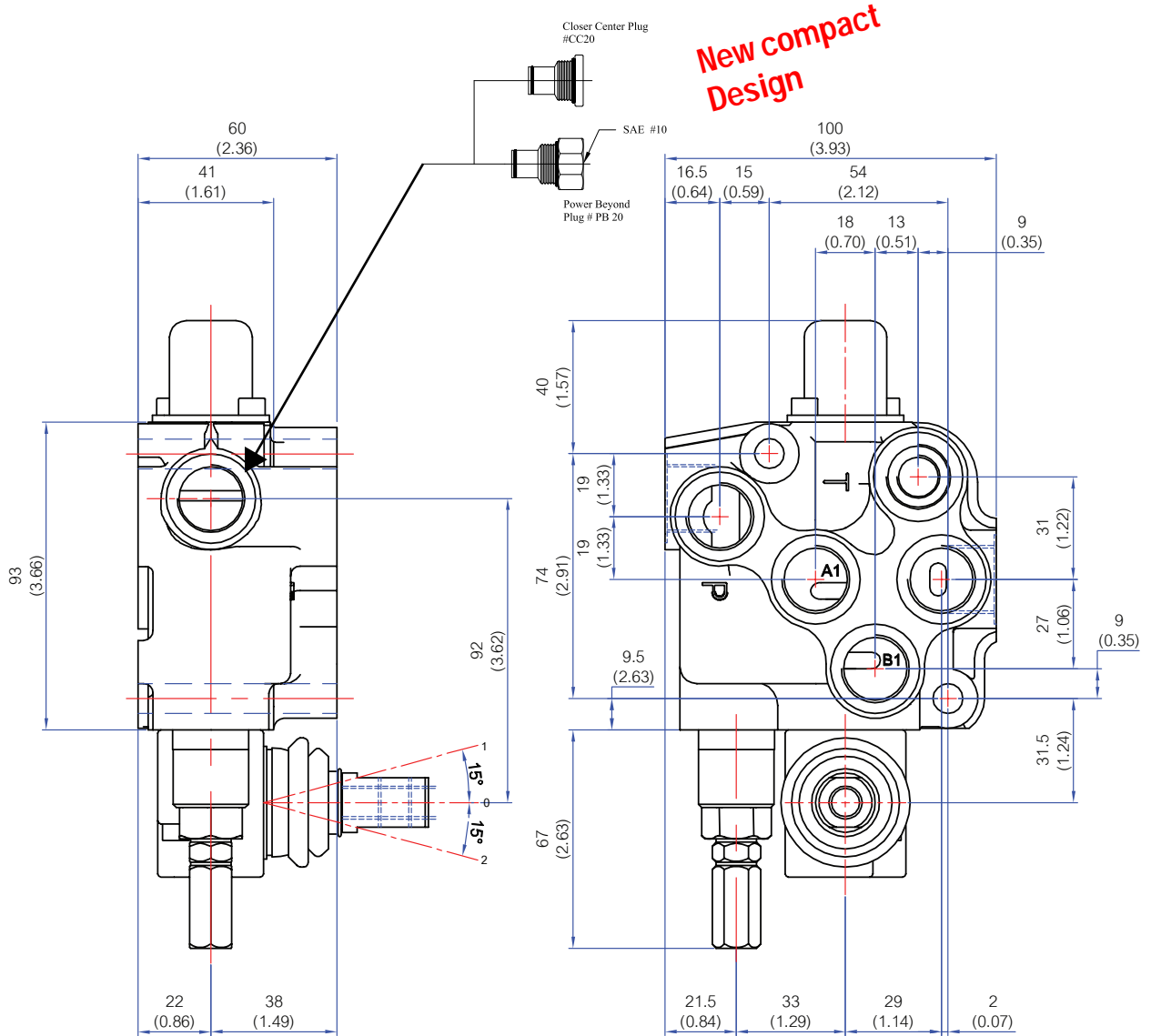
Valve Ports			
Thread	Port - A & B	Pressure	Tank
SAE	SAE-8	SAE- 10	SAE- 10
NPT	1/2"	1/2"	1/2"
BSP	1/2"	1/2"	1/2"



IFP MD20 MANUALLY OPERATED MONOBLOCK VALVE "Single Spool"



Dimensiones: mm (Inches)

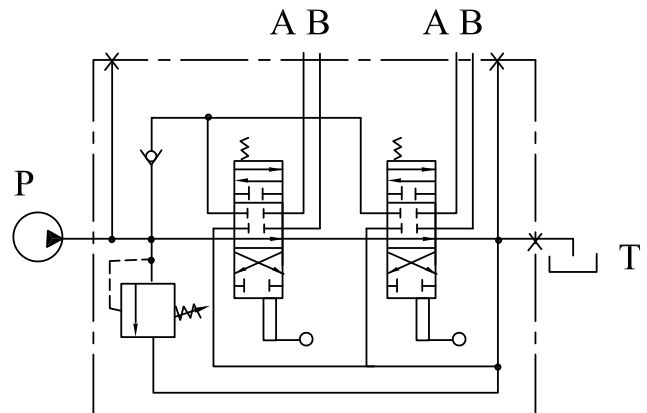
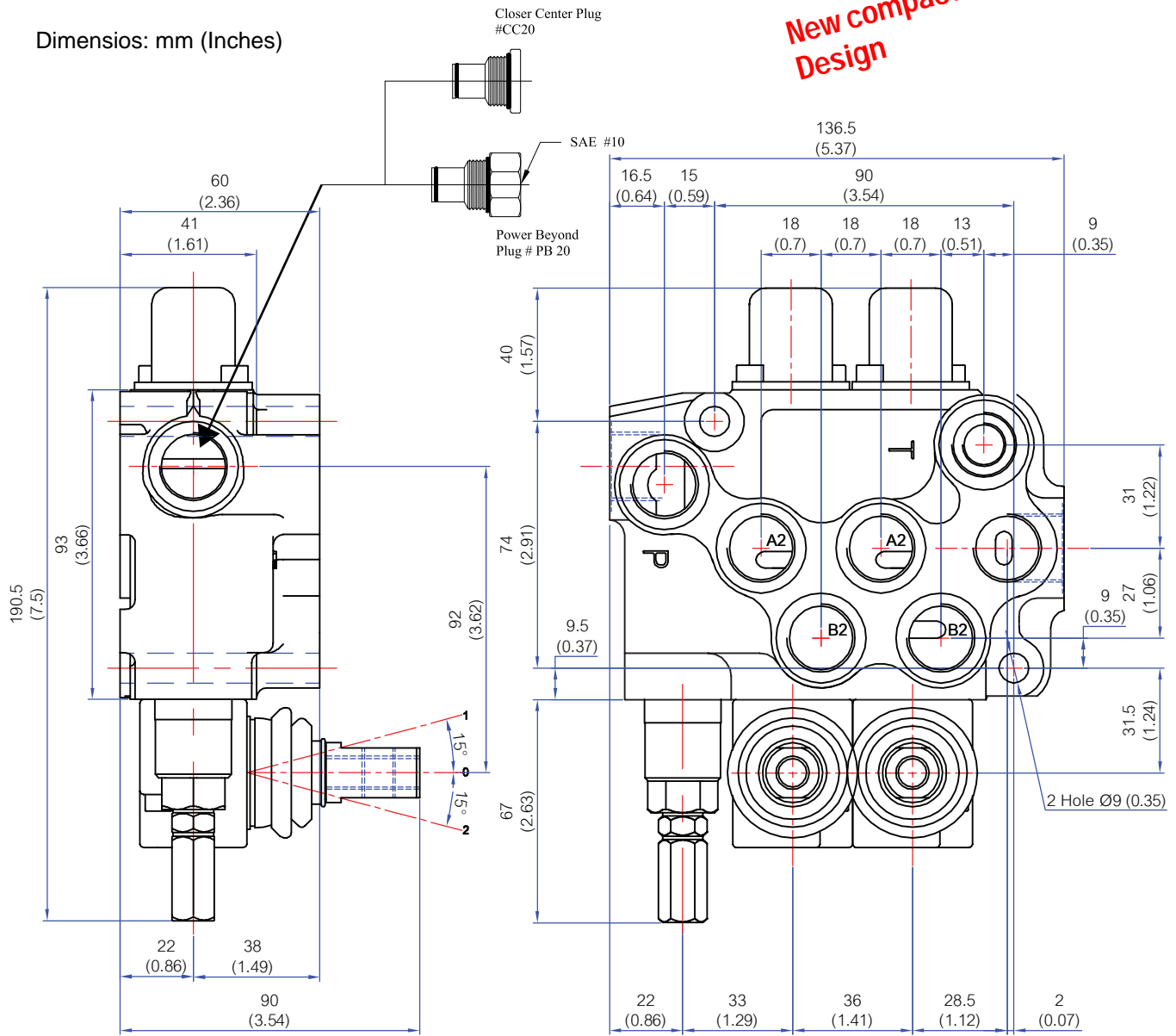


IFP MD20 MANUALLY OPERATED MONOBLOCK VALVE "Double Spool"

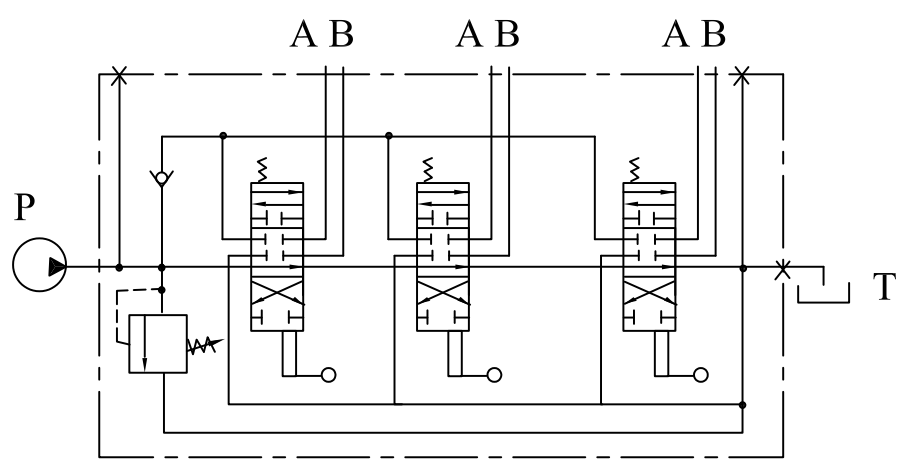
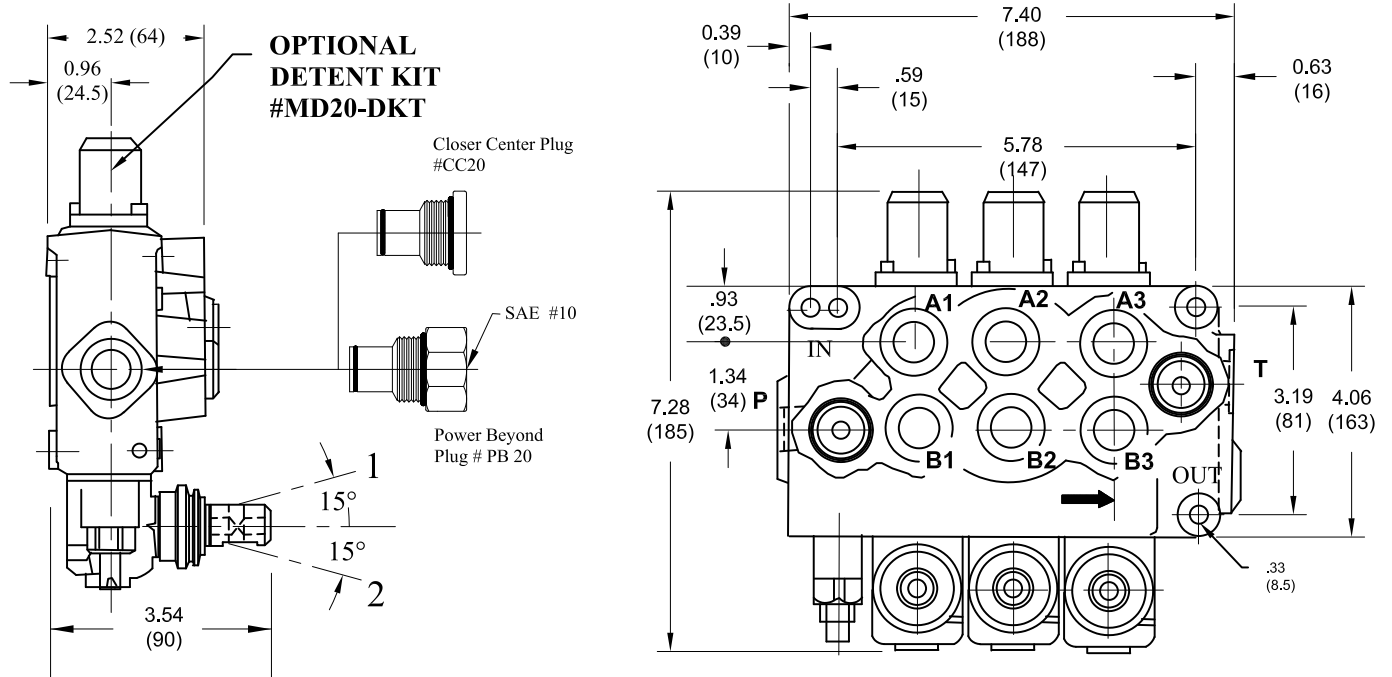


Dimensiones: mm (Inches)

New compact Design

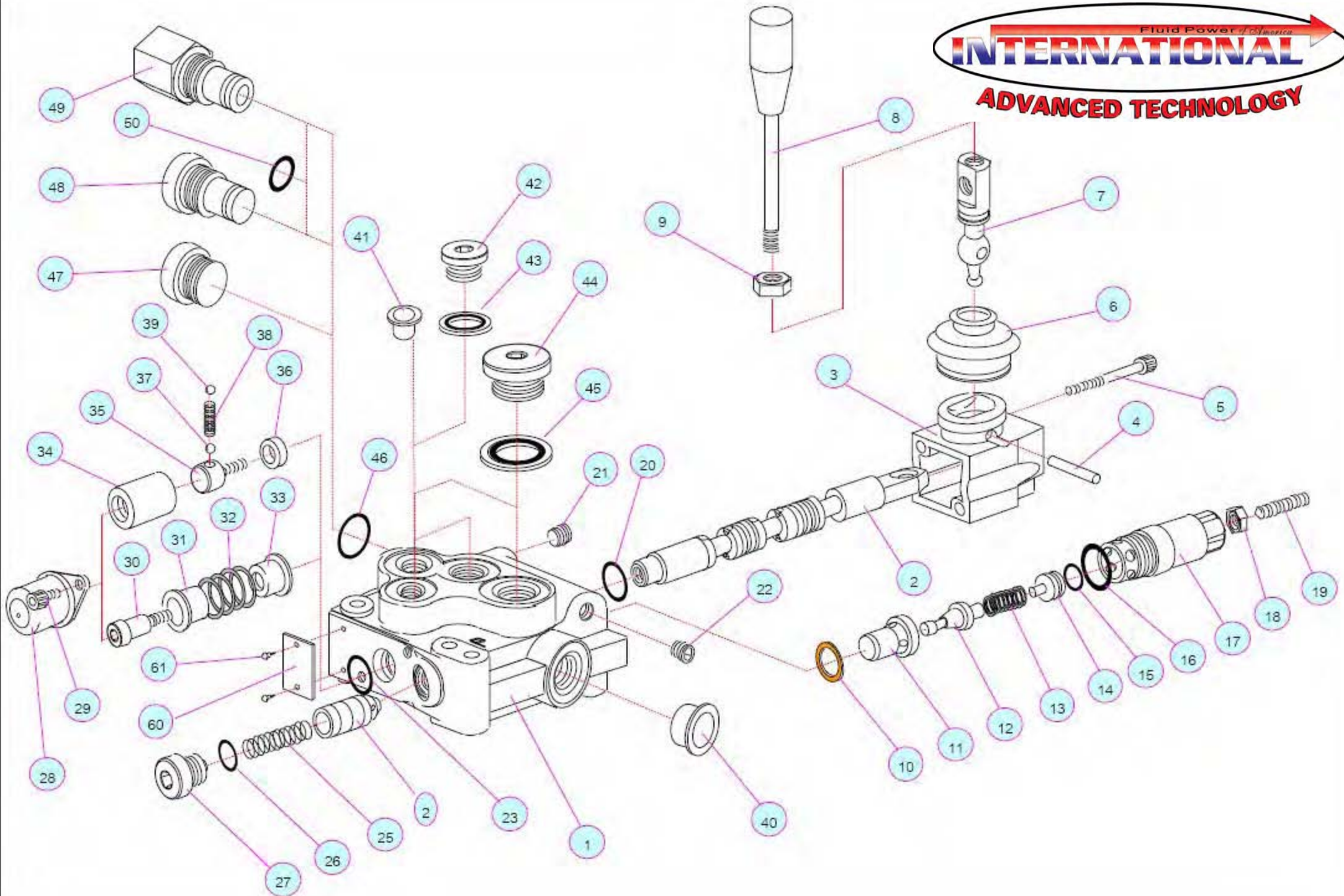


IFP MD 20 MANUALLY OPERATED MONOBLOCK VALVE "TRIPLE SPOOL"



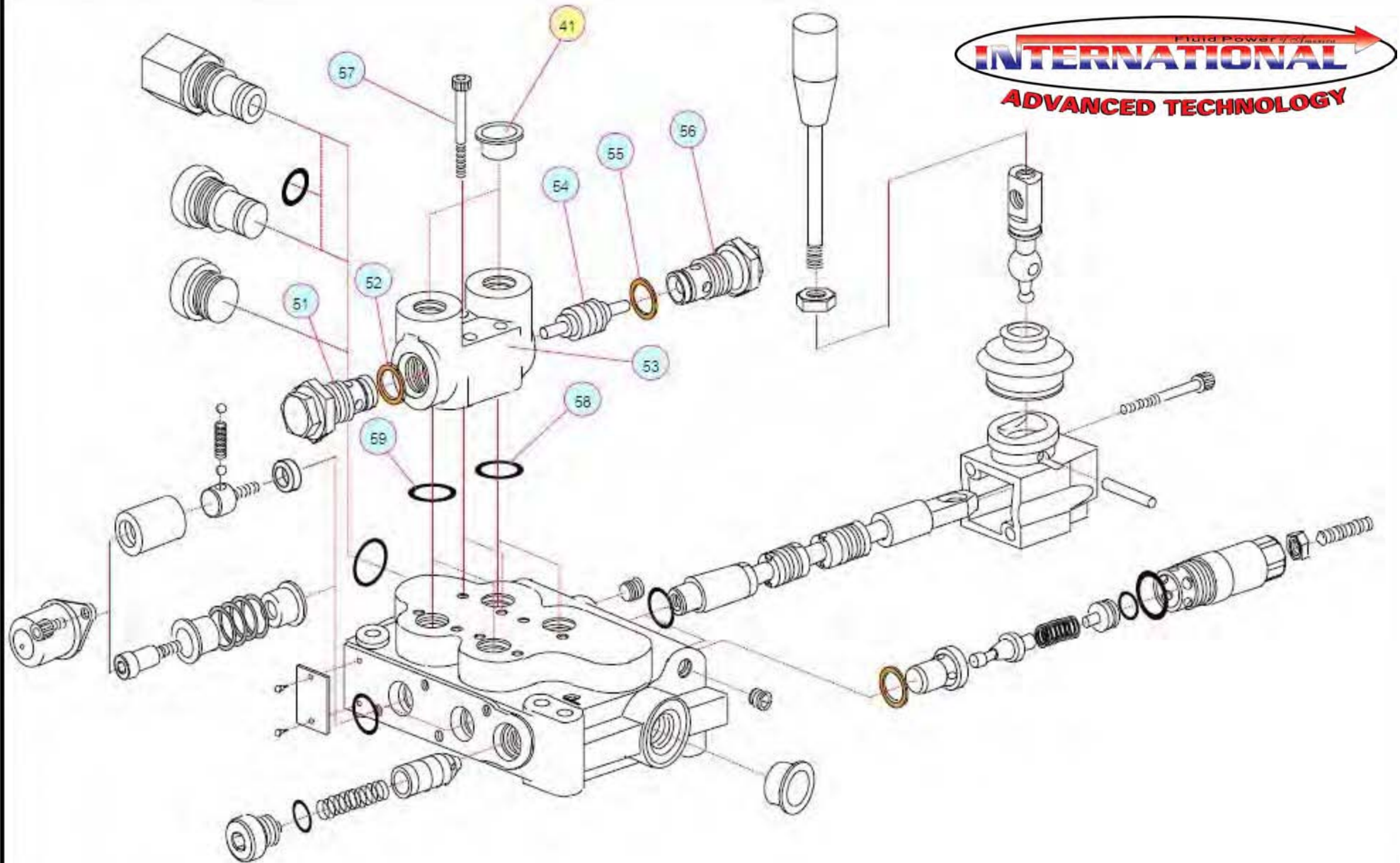
PARTS DRAWING: IFP MD20-1 / 1-SECTION MONOBLOCK VALVE

Date: OCTOBER 14-2008

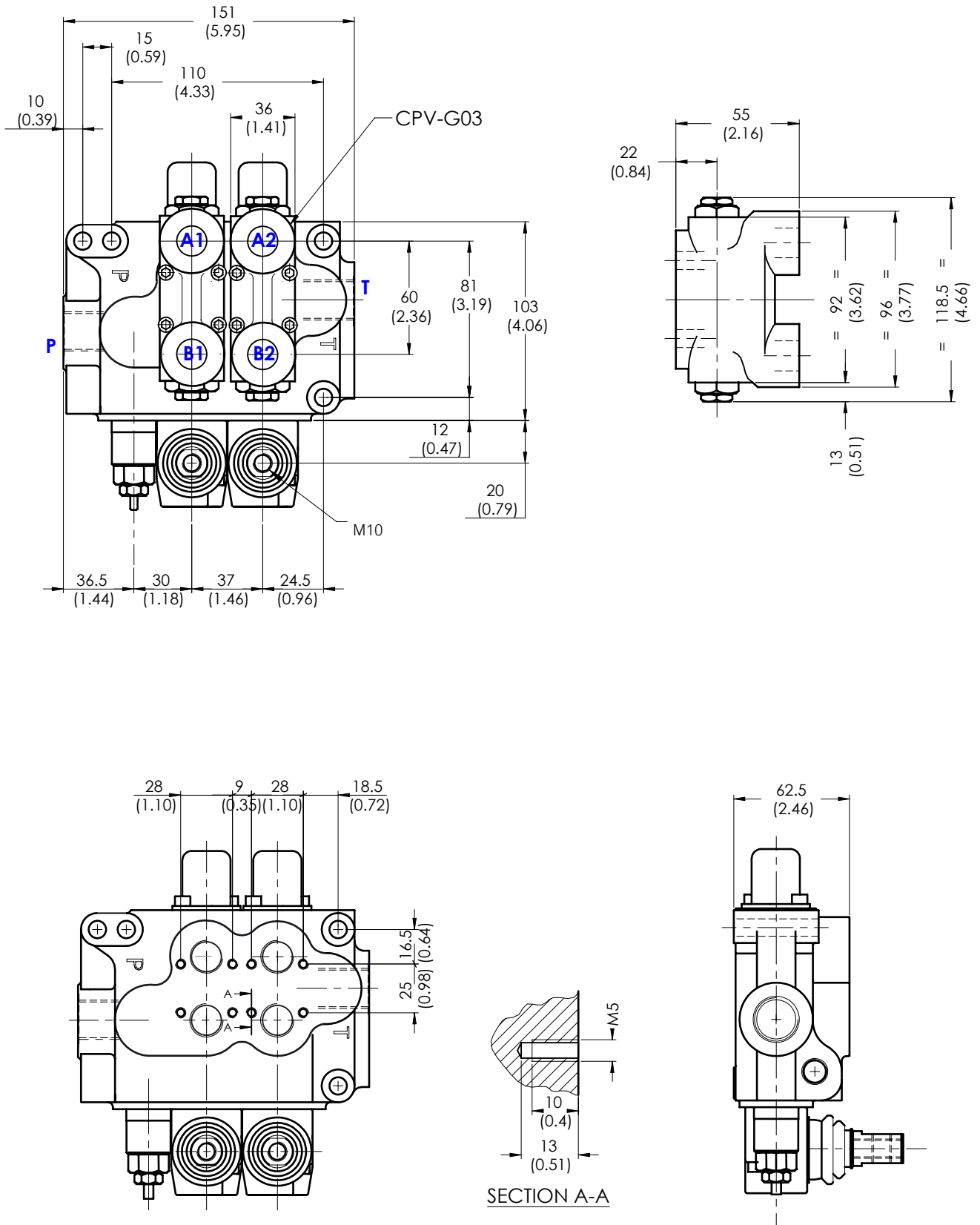


PARTS DRAWING: IFP MD20-2 / 2-SECTION MONOBLOCK VALVE

Date: OCTOBER 14 - 2008



IFP MD20 MONOBLOCK VALVE OPTIONAL P.O. CHECK VALVE ASS.



Dimensions - Millimeters (inches)

IFP MD50 MANUALLY OPERATED MONOBLOCK VALVE



FEATURES

- * Adjustable Balanced Piston Relief Valve
- * Power Beyond / Closed Center Available
- * Integral Load Holding Check Valve
- * Optional Pilot Operated Check Valves
- * Single / Double acting & Motor spools
- * Spring Return or Detent



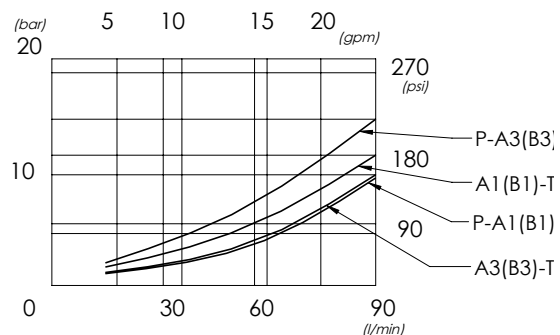
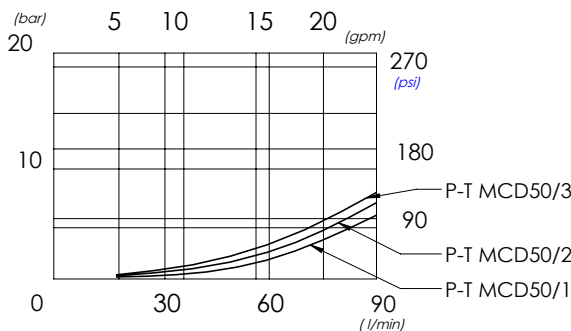
MD50 ORDERING CODE

IFP MD 50 1 C S D P 71

Monoblock Valve | **Valve Series** 50 = 30 GPM | **Number of Spools** 1 = 1 Spool, 2 = 2 Spool, 3 = 3 Spool | **Spool Type** C = Double Acting, S = Single Acting, M = Motor Spool | **Port Type** S = SAE (Std), N = NPT, B = BSP | **Spool Function** No Code = Spring Return, D = Detent | **Tank Port** No Code = Open Center, C = Closed Center, P = Power Beyond | **Design Number** 71

Model	MD50
Maximum Flow	30 US gpm (95 l/min)
Recommended flow	18 US gpm (70 l/min)
Maximum Pressure	5000 PSI (350 bar)
Maximum Back Pressure	1160 PSI (80 bar)
Leakage @1500 PSI (100bar)	0.125 in3/min (1 cm3/min)
Weight MD50 -1	12.1 lbs (5.5 kg)
Weight MD50 -2	18.7 lbs (8.5 kg)
Weight MD50 -3	25.4 lbs (11.5 kg)

Valve Ports			
Thread	Port - A & B	Pressure	Tank
SAE	SAE-10	SAE- 12	SAE- 12
NPT	1/2"	3/4"	3/4"
BSP	1/2"	3/4"	3/4"



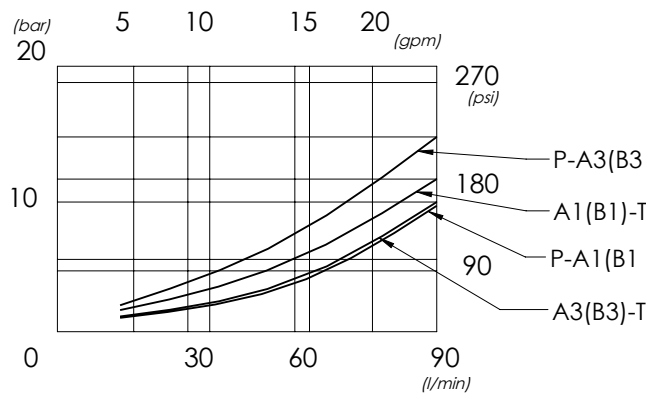
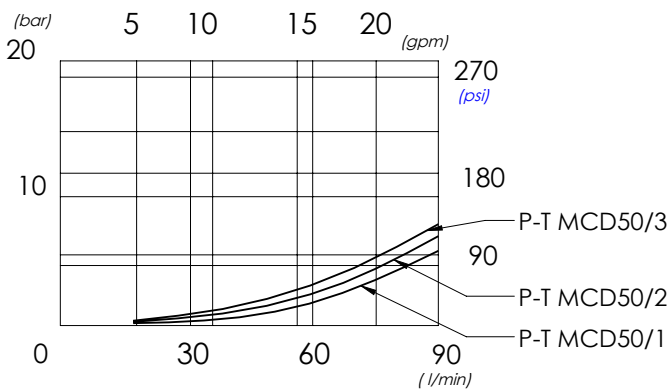
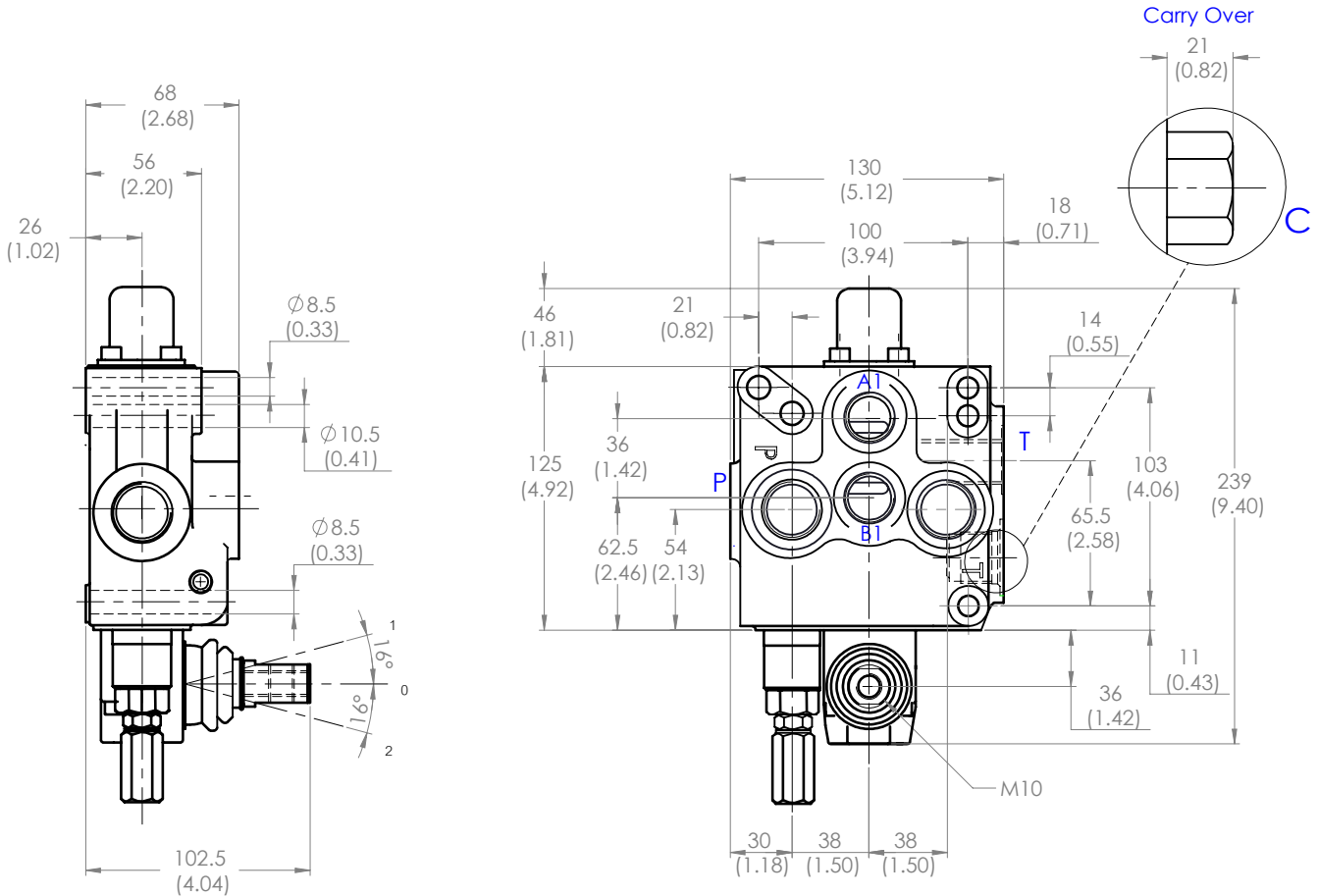
IFP MD50 SINGLE SPOOL DIMENSIONAL DRAWING



Standard working conditions

Max. recommended flow	70 l/min	(18 GPM)
Max. pressure	350 bar	(5100 PSI)
Max. backpressure	80 bar	(1160 PSI)

Thread	Port A-B	Port P-C	Port T
BSP	1/2"	1/2"	3/4"
	3/4"	3/4"	3/4"
SAE	SAE10	SAE12	SAE12

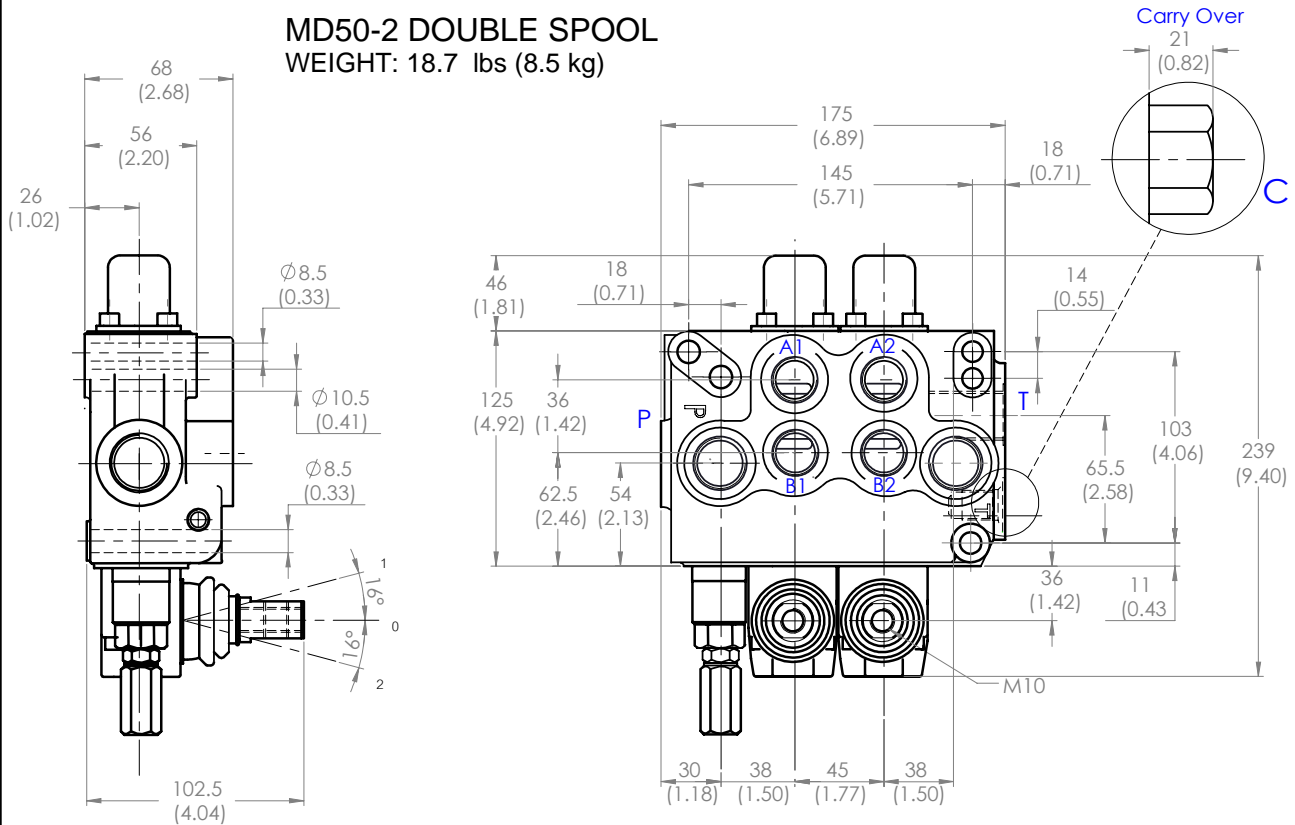


PRESSURE DROP

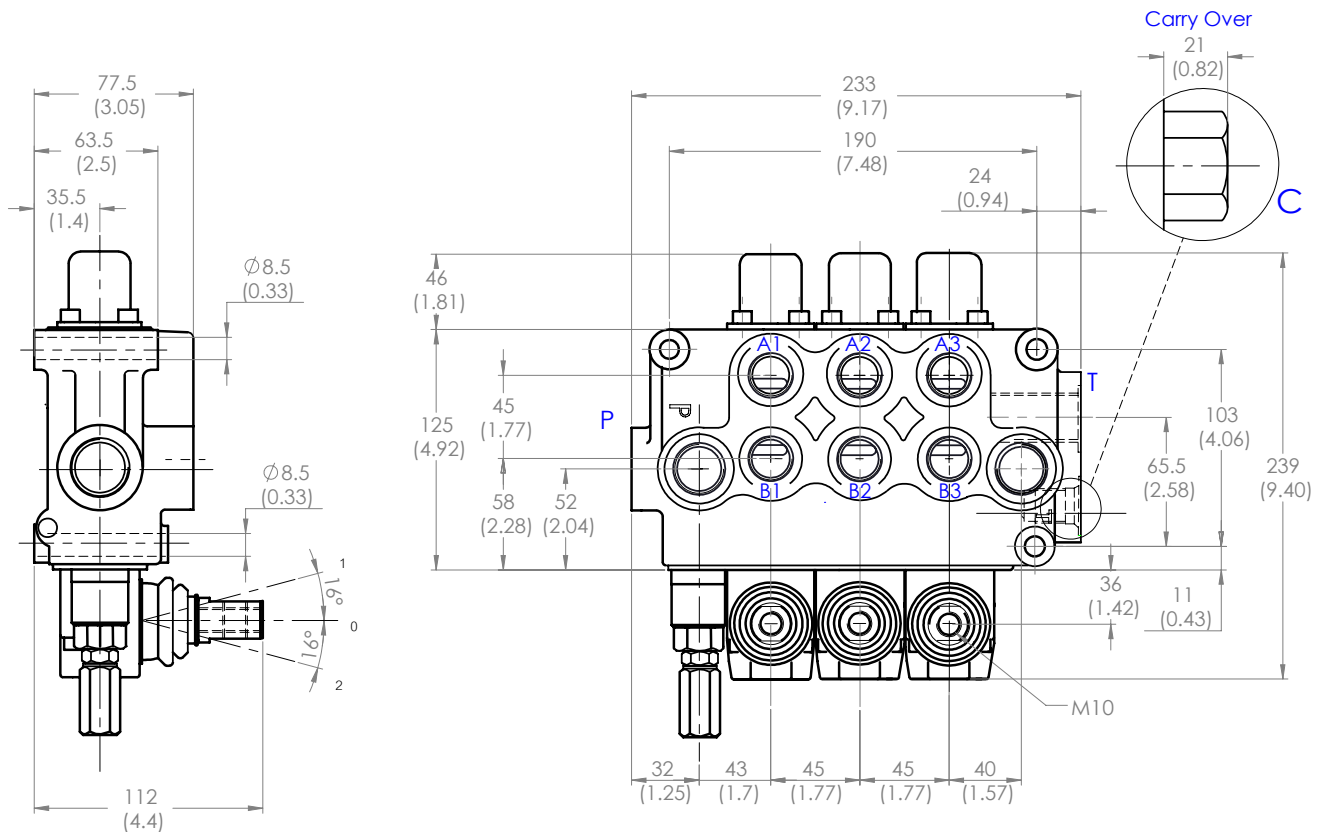
MD50 DOUBLE / TRIPLE SPOOL DIMENSIONAL DRAWING



MD50-2 DOUBLE SPOOL
WEIGHT: 18.7 lbs (8.5 kg)

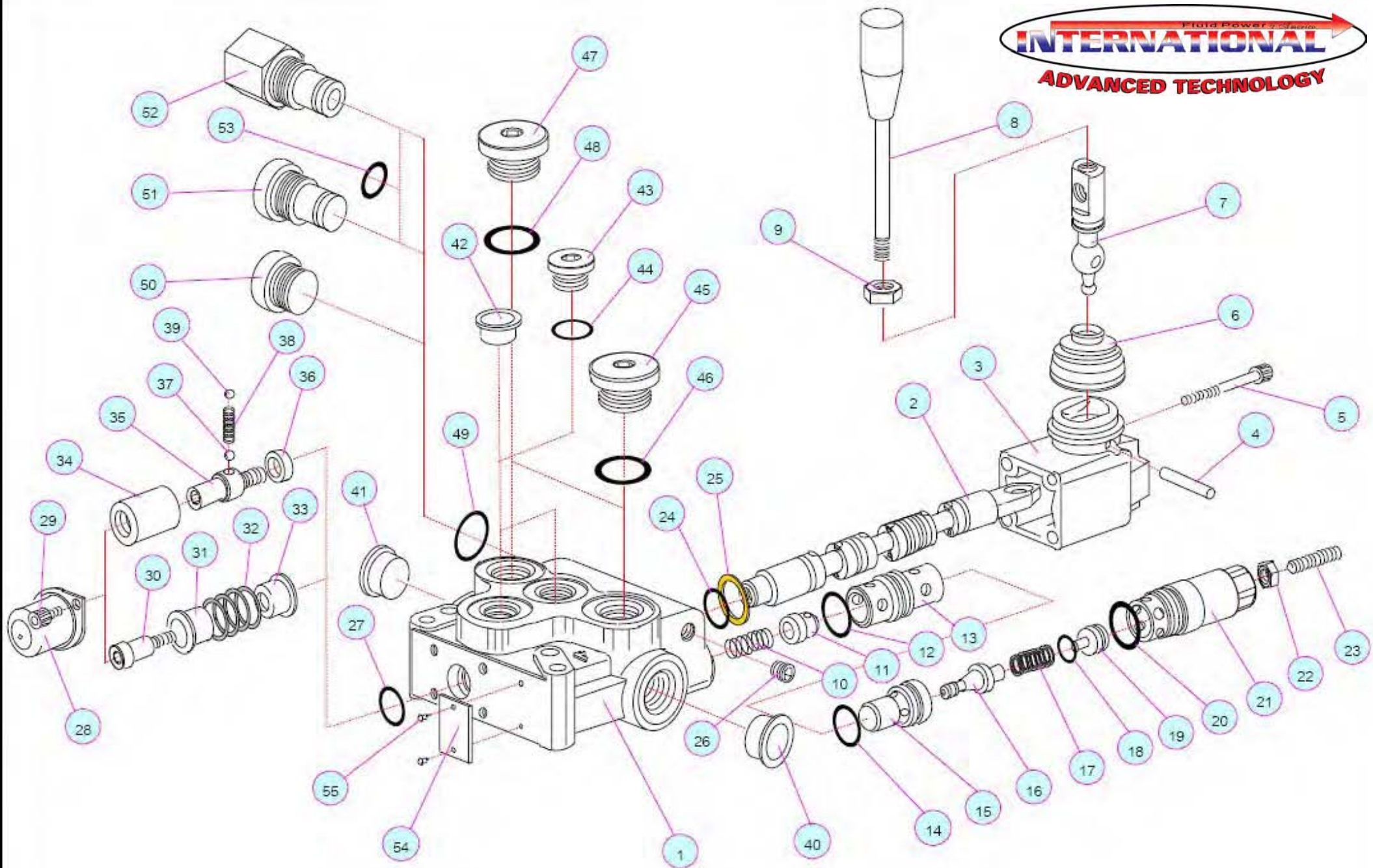


MD50-3 TRIPLE SPOOL
WEIGHT: 25.4 lbs (11.5 kg)



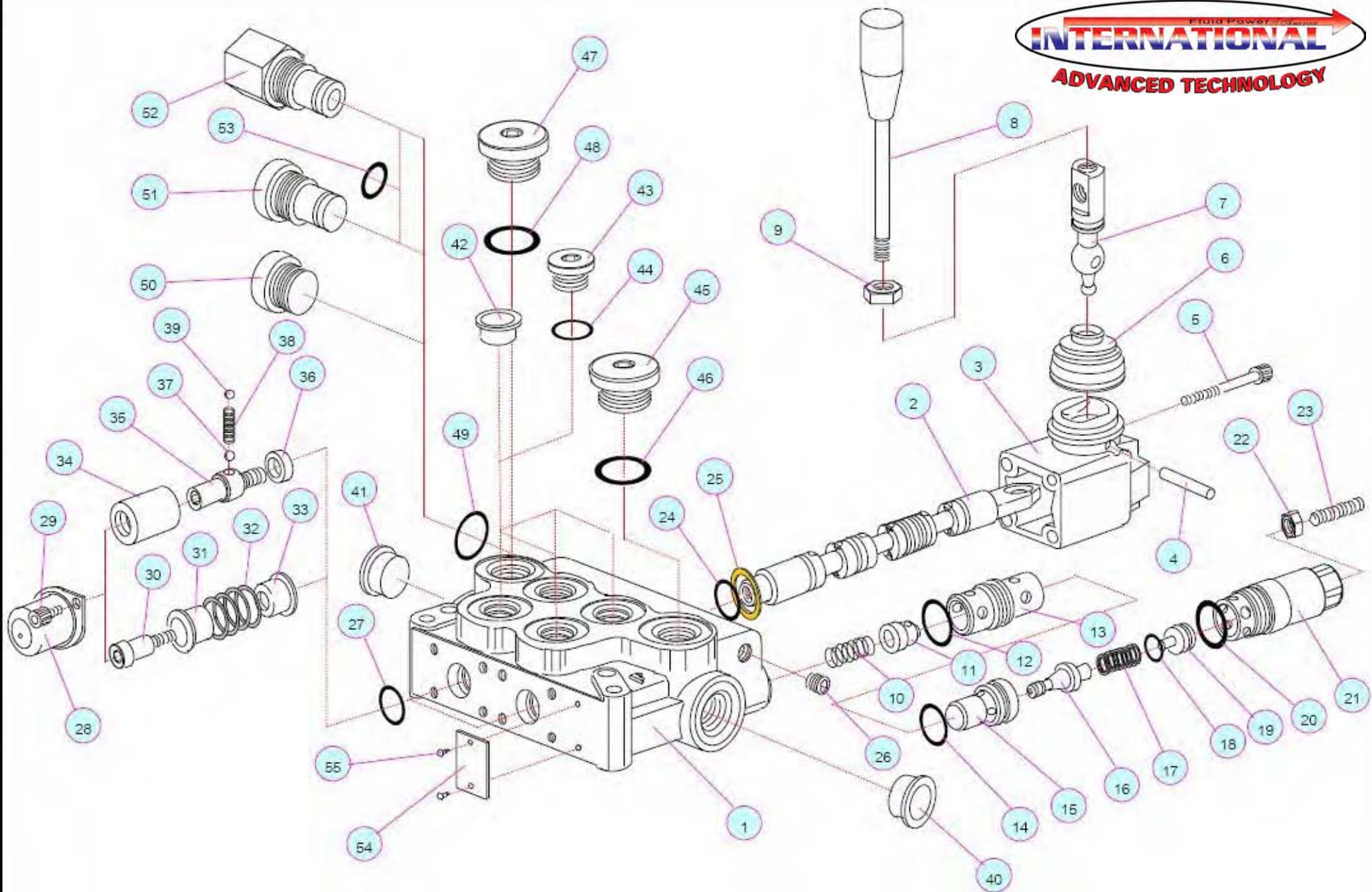
PARTS DRAWING: IFP MD50-1 / 1-SECTION MONOBLOCK VALVE

Date: OCTOBER 14-2008



PARTS DRAWING: IFP MD50-2 2 SECTION MONOBLOCK VALVE

Date: OCTOBER 14-2008



IFP VCD 25 MANUALLY OPERATED SECTIONAL VALVE



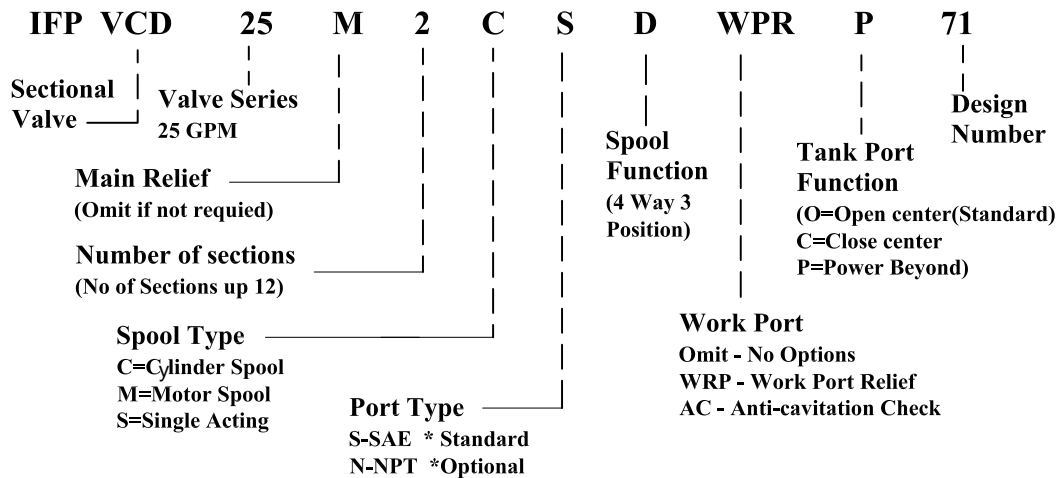
FEATURES

- Adjustable Balanced Piston Relief Valve
- Power Beyond / Closed Center Available
- Integral Load Holding Check Valve
- Optional Pilot Operated Check Valve
- Spring Return or Detent



MODEL		VCD 25	
Max. recom. flow		25 US GPM (95 LPM)	
Recommended flow		21 US GPM (80 LPM)	
Max. Pressure		5000 PSI (350 bar)	
Leakage @1500 PSI (100bar)		0.12 in ³ /min(2 cm ³ /min)	
Tie rod tightening torque		35 Nm	20 lb ft
Weight LBS(Kg)		22.4(10.2) - 115.5(52.5)	
Port Sizes	Pressure	SAE 10	3/4 NPT
	Tank	SAE 10	3/4 NPT
	Work	SAE 8	1/2 NPT

ASSEMBLED SECTIONAL VALVE CODE



WORK SECTION AND ACCESSORY CODE

- VCD25 M - Inlet Section C/W Main relief
- VCD25 O - Outlet Section / Open Center
- VCD25 D - Work section / Spring Return
4 Way 3 Position Cylinder Spool
- WPR - Work Port Relief
- AC25 - Anti-cavitation check

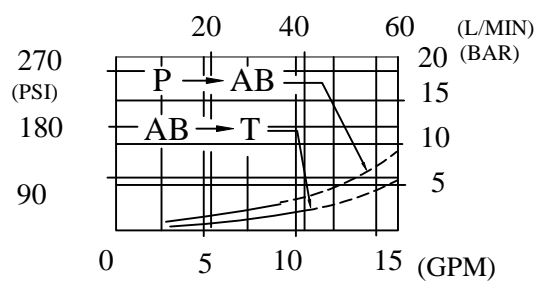
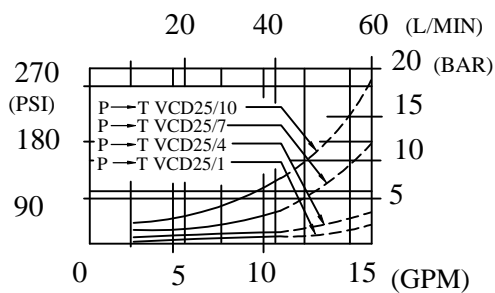
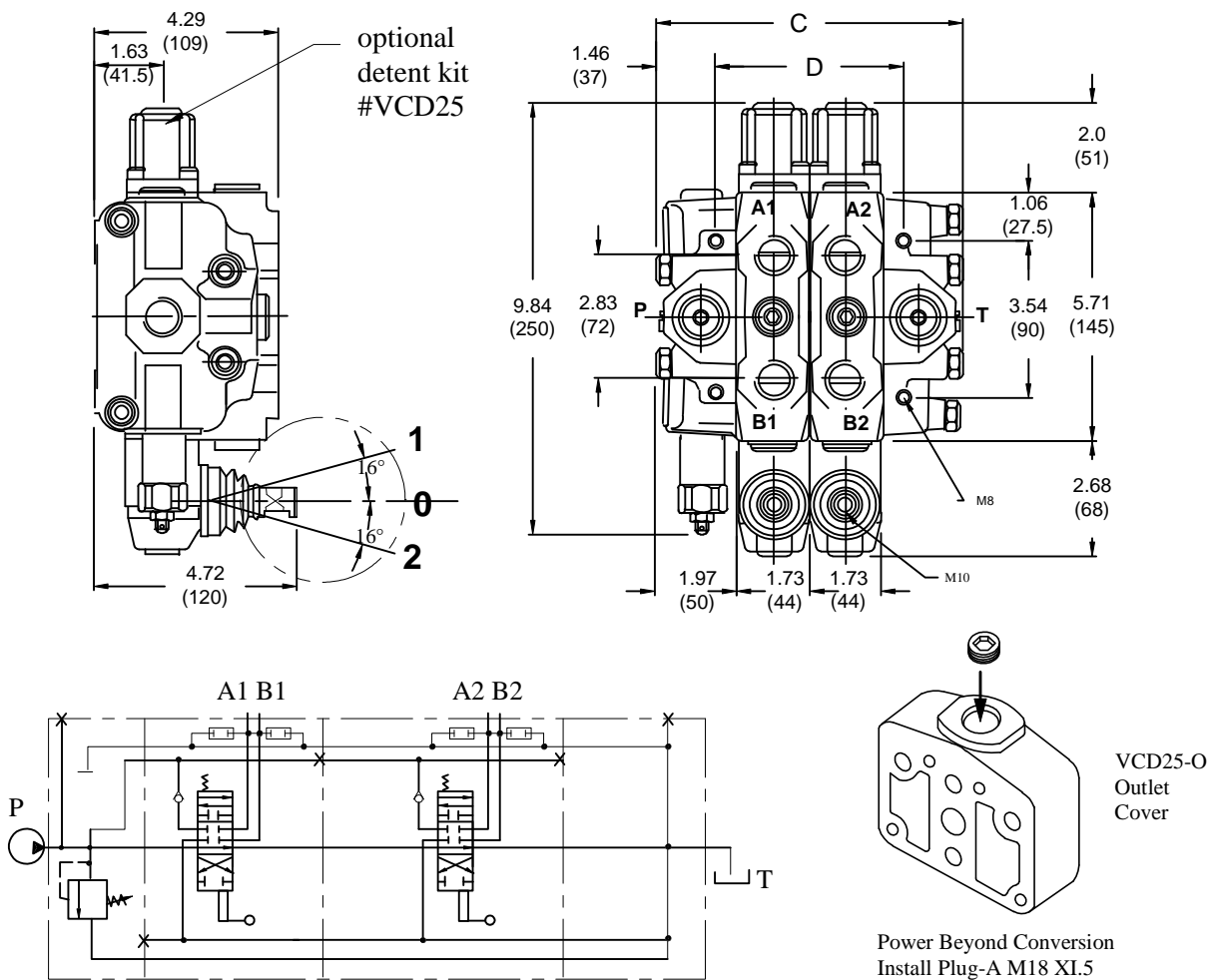
Note- If Other Than SAE ports Please Specify

IFP VCD 25 MANUALLY OPERATED SECTIONAL VALVE



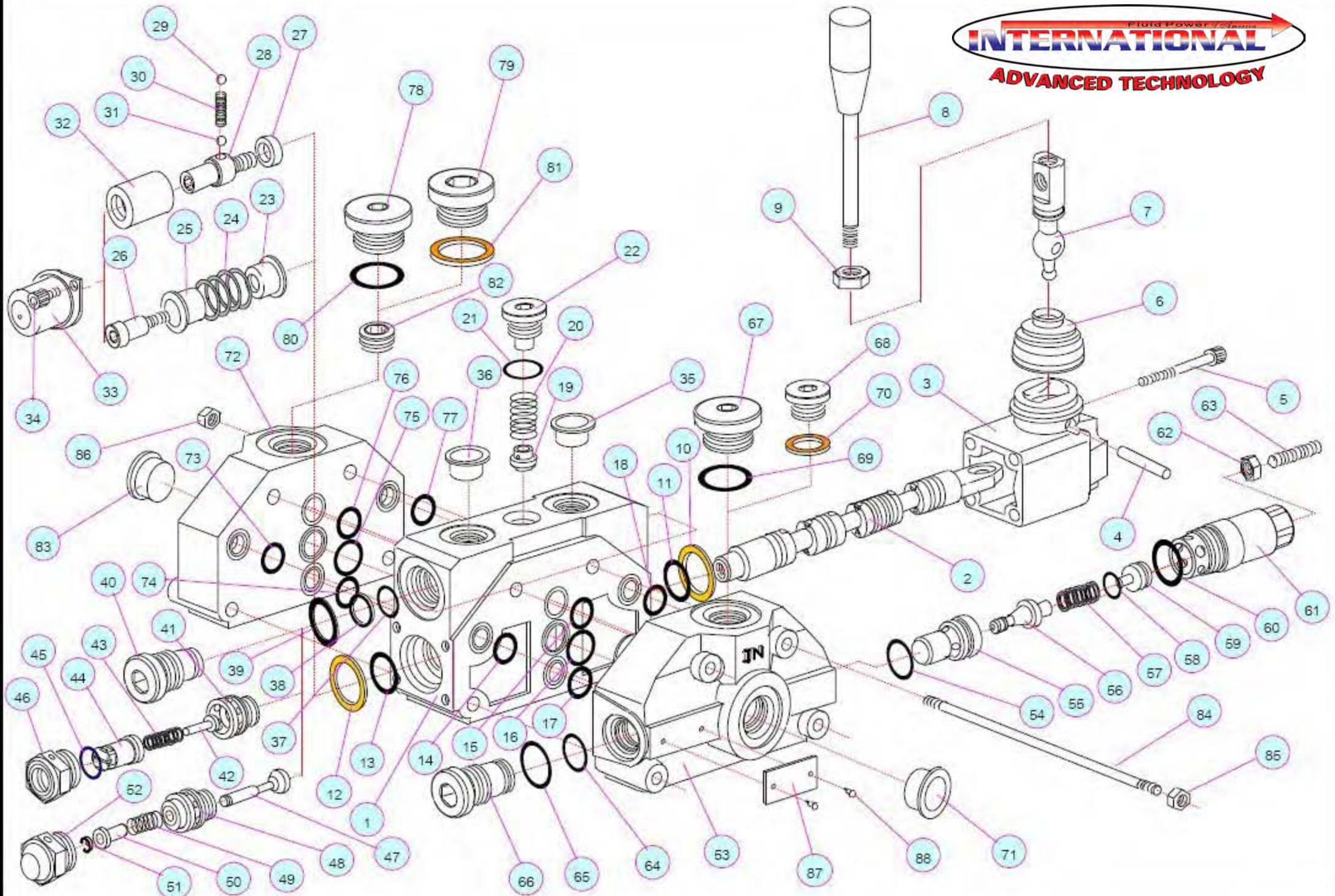
DIMENSIONS inch (mm)

	C		D		Weight	
	mm	inch	mm	inch	Kg	lbs
VCD25/1	144	5.67	70	2.76	10.2	22.4
VCD25/2	188	7.40	114	4.49	14.9	32.8
VCD25/3	232	9.13	158	6.22	19.6	43.1
VCD25/4	276	10.87	202	7.95	24.3	53.5
VCD25/5	320	12.60	246	9.69	29.0	63.8
VCD25/6	364	14.33	290	11.42	33.7	74.1
VCD25/7	408	16.06	334	13.15	38.4	84.5
VCD25/8	452	17.80	378	14.88	43.1	94.8
VCD25/9	496	19.53	422	16.61	47.8	105.2
VCD25/10	540	21.26	466	18.35	52.5	115.5



PARTS DRAWING: IFP VCD25 SECTIONAL VALVE

Date: October 14-2008



LS5000 DIRECTIONAL CONTROL VALVE 3 POSITION 4 WAY HYDRAULIC KICK OUT



SPECIFICATIONS:

- Pressure rating
maximum design and test pressure.....3000 PSI (205 bar)
- Capacity
Nominal Flow.....25 GPM (95 LPM)
- Maximum Operating Temperature.....180° F (82.2°C)
- Filtration Required (minimum).....10 micrometre
- Maximum Tank Pressure.....500 PSI (35 bar)
- Relief Valve Setting.....2200 PSI (152 bar)
(The relief is set at 3 GPM and 120° F)
- Detent Release Pressure.....1100 PSI (76 bar)
- Weight.....12 LBS (5.45 kg)



STANDARD VALVES AVAILABLE:

Order code	Work port size	In/out port size
LS 5000-1	1/2 " NPT	3/4" NPT
LS 5000-2	3/4 " NPT	3/4" NPT

STANDARD FEATURES

- The casting body is made of high tensile strength ductile iron.
- Hydraulically balanced, hard chrome plated spool.
- In neutral position, both work ports blocked, pump unloads to tank.
- Ideal for long splitter applications. Available with 3/4" NPT work ports for higher flow applications.

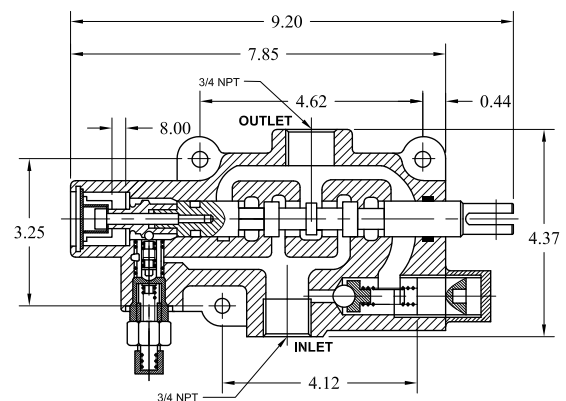
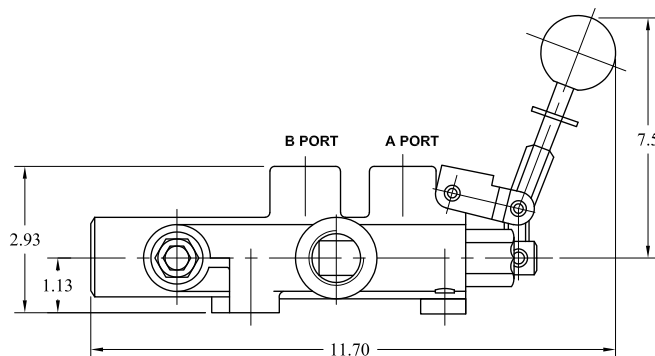
● PRESSURE RELEASE DETENT

This feature provides a pressure release detent for the spool "out" (hand in) position. When the spool is manually placed in the detent position oil is directed to the "B" port (the port away from the handle). When the pressure in the "B" port reaches a preset level the detent will release and the spool will center. The factory setting is 1100 PSI (76 bar). The detent release pressure is adjustable by loosening the jam nut and turning the adjusting screw. Turning the adjusting screw clockwise will increase the detent release pressure and counterclockwise will decrease the detent release pressure.

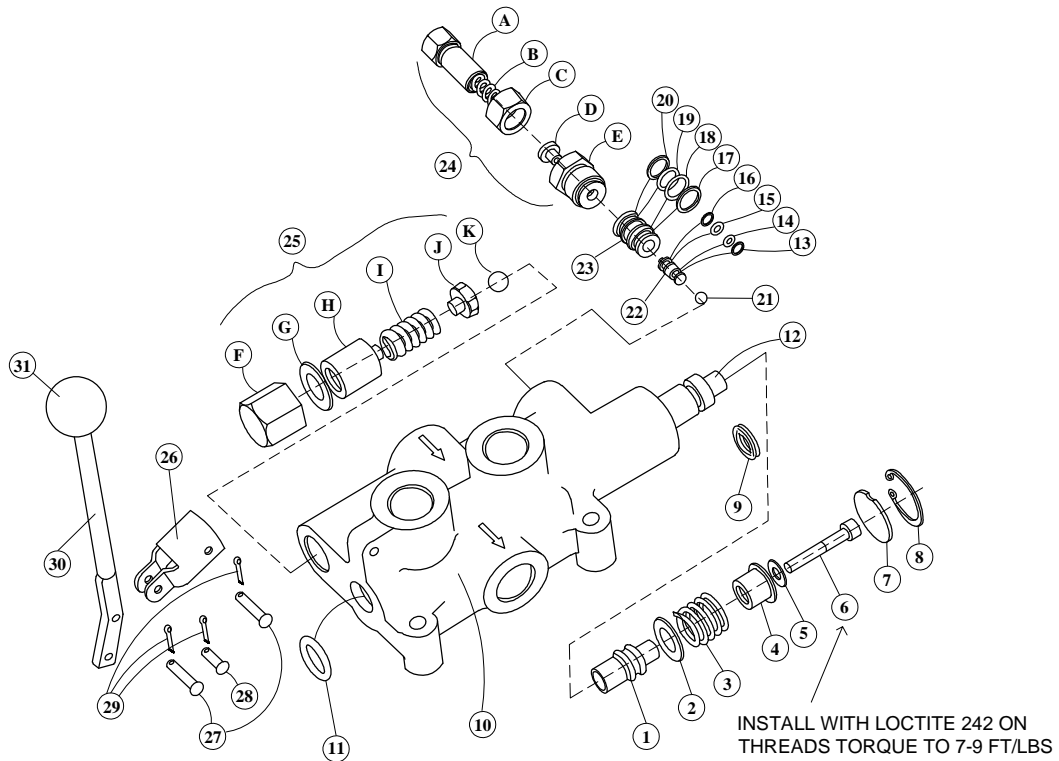
Note: if the detent release pressure is set too high the spool will not center. If the pressure is too low the detent will not hold. If cap screw item 6 becomes loose detent will not function properly.

● RELIEF VALVE

An adjustable ball spring relief valve is standard on all CV 3000 valves. The standard factory setting is 2200 PSI (152 bar) @ 3 GPM (11.4 L/min) and 120° F (48.9° C). Other settings can be specified. The relief pressure is adjusted by removing nut, and turning the adjusting screw. Turning the adjusting screw clockwise will increase the pressure and counterclockwise will decrease the pressure (a pressure gauge must be installed in the inlet line whenever the relief pressure is adjusted). Do not back out adjusting screw to the point it falls out.



LS5000 DIRECTIONAL CONTROL VALVE SERVICE PARTS INFORMATION



LS5000 PARTS LIST

ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	Detent sleeve	22	Piston
2	Washer	23	Piston sleeve
3	Spring	24	Detent adjusting cartridge
4	Stop cup	25	Relief kit
5	Washer	26	Link
6	Cap screw	27	Clevis pin
7	Spacer	28	Clevis pin
8	Snap ring	29	Cotter pin
9	U-cup	30	Handle
10	Valve Body	31	Knob
11	O-ring	A	Pressure Release Detent / Adjusting Screw
12	Valve spool	B	Spring
13	Back-up washer	C	Nut
14	O-ring	D	Spring Seat
15	O-ring	E	Hex Cover
16	Back-up washer	F	Acorn Nut
17	Back-up washer	G	Aluminum Washer
18	O-ring	H	Relief Adjusting Screw
19	O-ring	I	Spring
20	Back-up washer	J	Ball Seat
21	Steel ball	K	Steel Ball

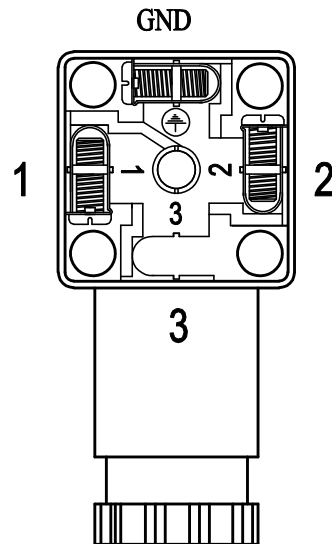
DIN CONNECTOR WIRING



LOOKING FROM THE TOP OF CONNECTOR

D.C. CONNECTION

CONN 1	NEGATIVE
CONN 2	POSITIVE
CONN 3	FREE
CONN GND	GROUND

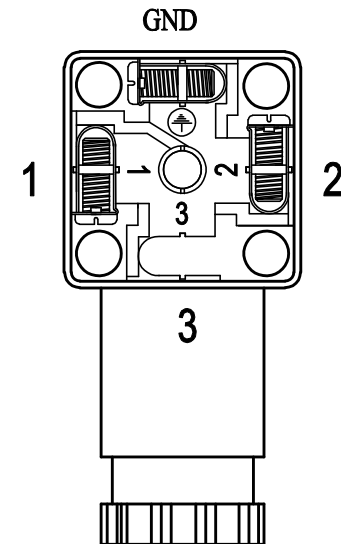


NEGATIVE WIRE GOES TO CONNECTION 1
POSITIVE WIRE GOES TO CONNECTION 2
GROUND WIRE GOES TO CONNECTION: GND
CONNECTION 3 IS FREE

LOOKING FROM THE TOP OF CONNECTOR

A.C. CONNECTION

CONN 1	WHITE
CONN 2	BLACK
CONN 3	FREE
CONN GND	GROUND



COMMON WIRE (NORMALLY WHITE) GOES TO CONNECTION 1
LIVE WIRE (NORMALLY BLACK) GOES TO CONNECTION 2
GROUND WIRE GOES TO CONNECTION: GND
CONNECTION 3 IS FREE