



ADVANCED TECHNOLOGY

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



FEATURES :

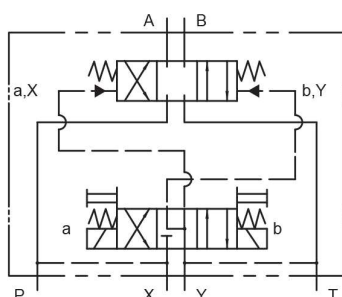
- Highest performance in NG 32
- Optimized spool design to reduce flow force
- Proven quality through 10 million endurance test
- Manual overrides standard
- P port pilot pressure insert for open center spools
- Connections to DIN, ISO and CETOP



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		159-3000 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 mm²/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 :





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

ORDERING CODE :

D G 10 – 2 C –ET–110V/60HzAC –90 –DN – **

1	2	3	4	5	6	7	8	9	10	11	12
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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 A B P T	1 A B P T	2 A B P T	3 A B P T
6 A B P T	7 A B P T	8 A B P T	11 A B P T
31 A B P T	33 A B P T		

0: Open center (all ports)

1: Open center (P, A to T)

2: Closed center (all ports)

3: Closed center (P, B)

5: Closed center (T, B)

6: Closed center (P only)

7: Open center (P to A, B)

8: Tandem center (P to T)

11: Open center (P, B to T)

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

110V/60HzAC

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

220V/60HzAC

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

12VDC: DC12V

24VDC: DC24V

10 DESIGN NUMBER

90

11 DESIGN NUMBER

DN: DIN 43650 Coils

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

DEUTSCH COIL AVAILABLE UPON REQUEST

12 OPTIONAL INQUIRY

SA: Stroke Adjustment on A Port

SB: Stroke Adjustment on B Port

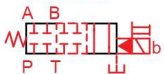
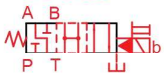
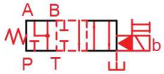
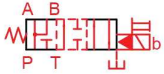
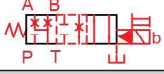
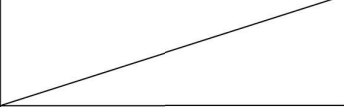
SW: Stroke Adjustment on Both A & B Port

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SPOOL TYPES:

DG10 SIZE 32

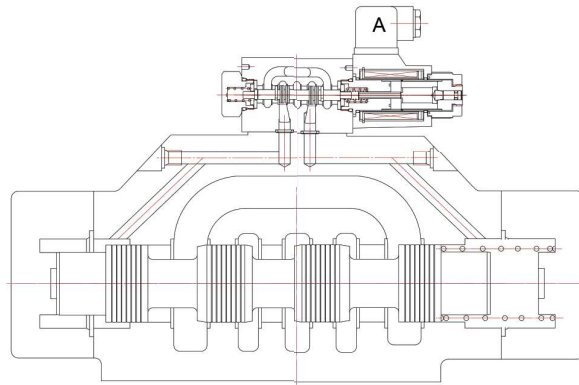
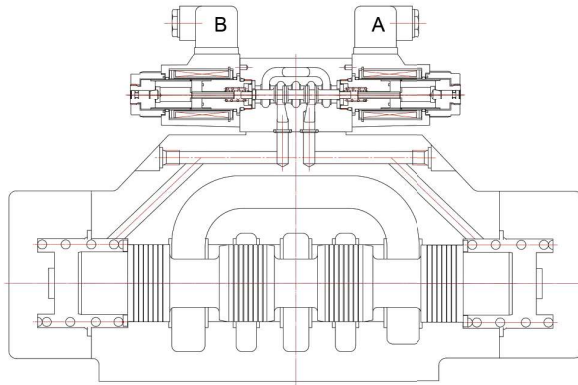
Position type at neutral	Double solenoid valves, spring centered -C-	Single solenoid valves, solenoid at port A end -B-	Single solenoid valves, solenoid at port B end -BL-
0 	DG10-0C 	DG10-0B 	DG10-0BL 
1 	DG10-1C 	DG10-1B 	DG10-1BL 
2 	DG10-2C 	DG10-2B 	DG10-2BL 
3 	DG10-3C 	DG10-3B 	DG10-3BL 
6 	DG10-6C 	DG10-6B 	DG10-6BL 
7 	DG10-7C 	DG10-7B 	DG10-7 BL 
8 	DG10-8C 	DG10-8B 	DG10-8BL 
11 	DG10-11C 	DG10-11B 	DG10-11BL 
31 	DG10-31C 	DG10-31B 	DG10-31BL 
33 	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 		DG08H-0A 	DG08H-0AL 
2 		DG08H-2A 	DG08H-2AL 

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

CROSS SECTION DIAGRAM:

■ DG10-2C-AC*72DN

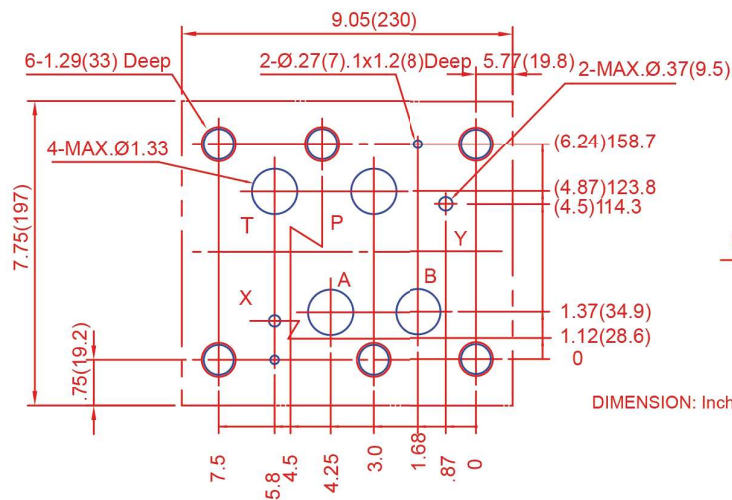
■ DG10-2A AC*72DN



INSTALLATION DIMENSIONS:

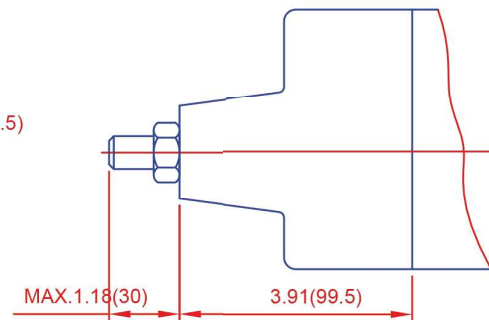
(Machined valve mounting face with position of ports)

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

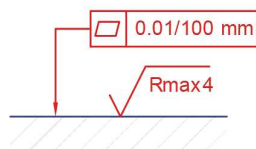


STROKE ADJUSTMENT

■ DG10-E-**-70-S



DIMENSION: Inches (mm)



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

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

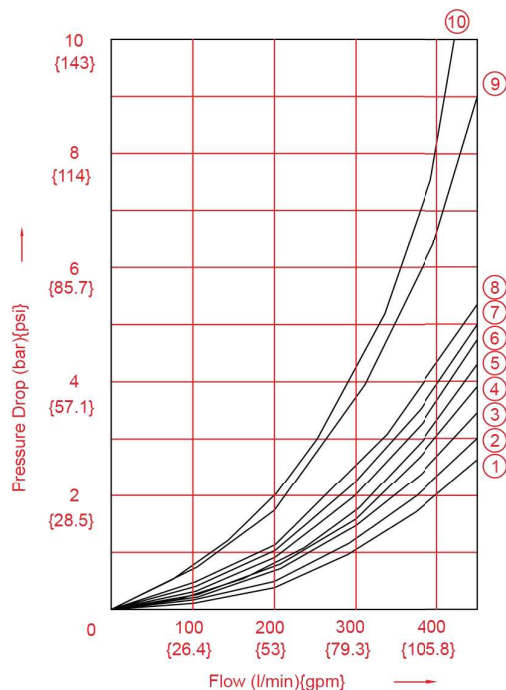
PERFORMANCE FIGURES & CURVES:

Pressure Drop Curve Reference Chart

Viscosity of Hydraulic Fluid: 20 mm²/s

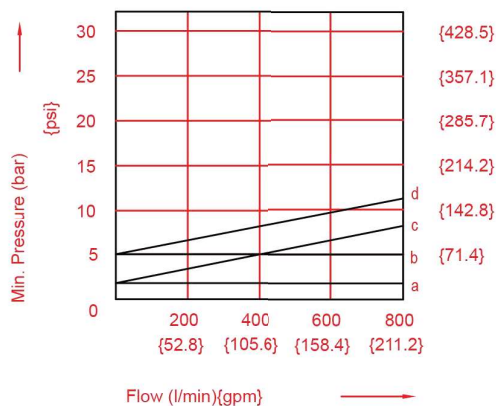
Spool Type	Pressure Drop Characteristics				
	P→A	P→B	A→T	B→T	P→T
0C	1	1	3	5	3
2C	2	2	4	6	-
3C / 31C	2	3	3	8	-
6C	2	2	3	4	-
8C	4	5	10	9	6
33C	2	2	6	6	-
0A	1	1	3	5	-
2A	2	2	4	6	-
6A	2	2	3	7	-

■ DG10-A-*-70



Min. Pressure V.S Flow Curve

■ DG10-*-A-*-70

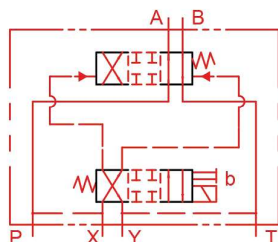


Spring	Spool	Curve
A, AL	0, 9	a
	2, 6	c
B, BL, C, N	0, 4, 8, 9	b
	2, 3, 6, 33	d

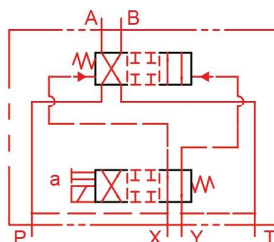
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DIMENSIONS:

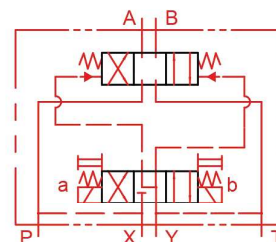
■ DG10-E-2A-T-**-*(A)



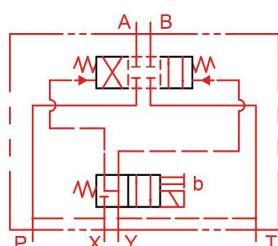
■ DG10-E-2AL-T-**-*(AL)



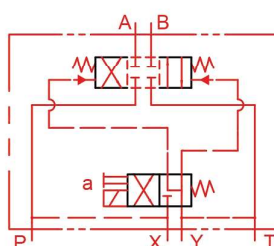
■ DG10-E-C-T-**-*



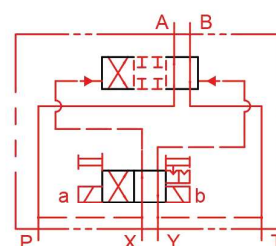
■ DG10-E-2B-T-**-*(B)



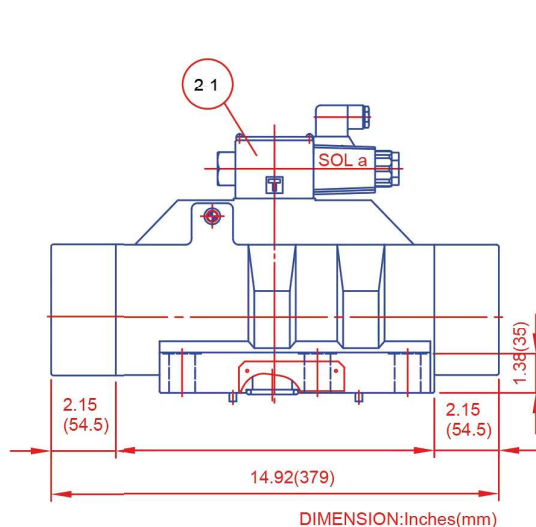
■ DG10-E-2BL-T-**-*(BL)



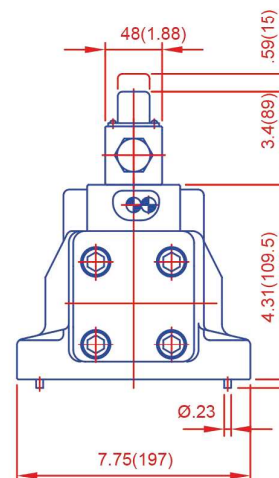
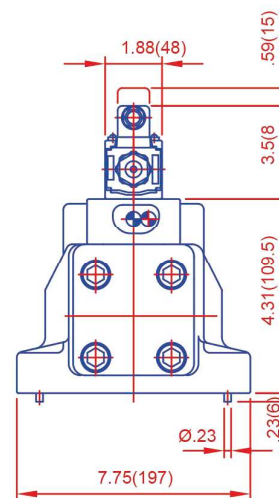
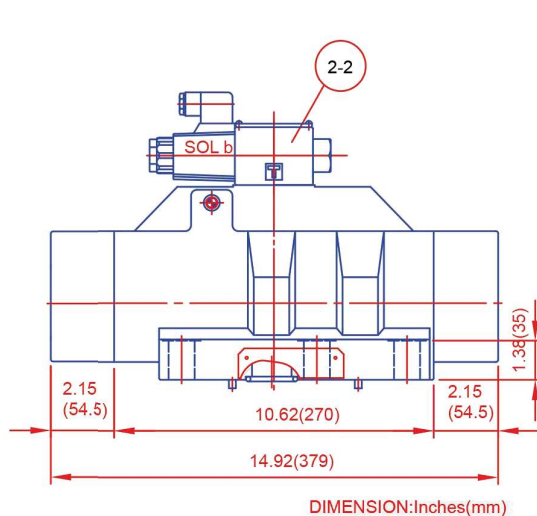
■ DG10-E-2N-T-**-*



■ DG10-E-*A AC* 72DN
*B



■ DG10-E-*AL AC* 72DN
* BL



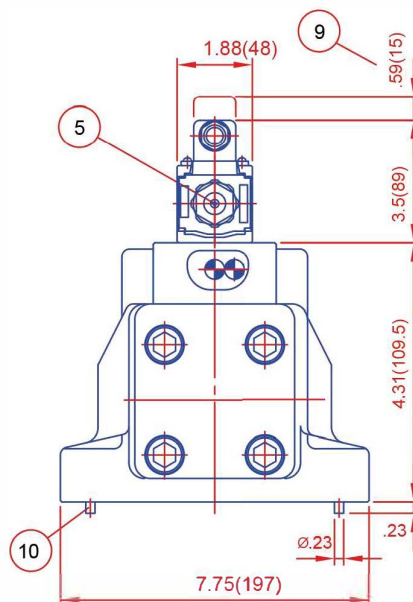
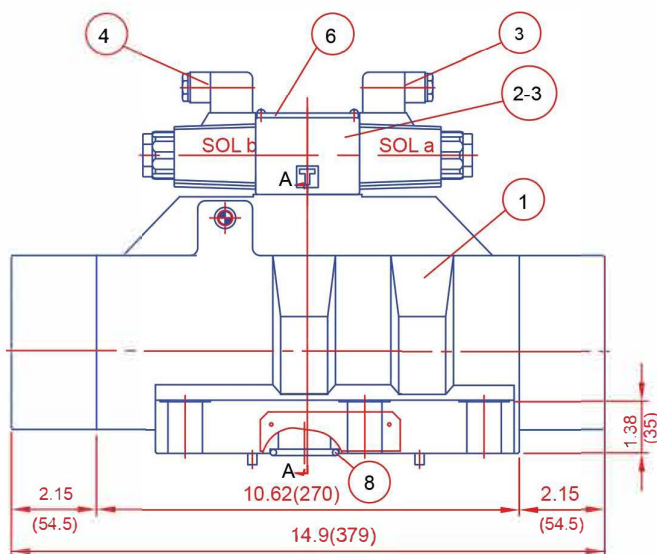
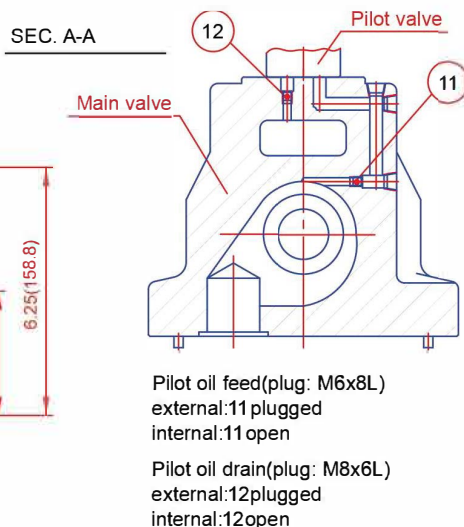
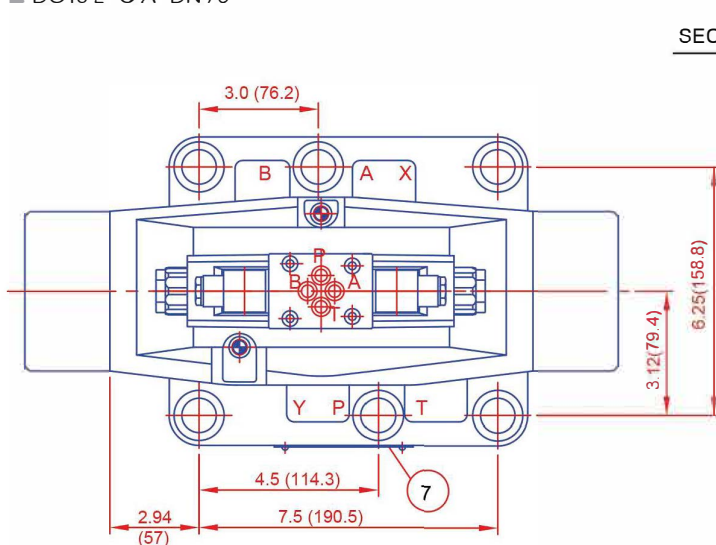
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PILOT OPERATED DIRECTIONAL VALVE SIZE NG32 / CETOP10

DIMENSIONS:

■ DG10-E-*C-A*-DN-70

DG10 SIZE 32



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

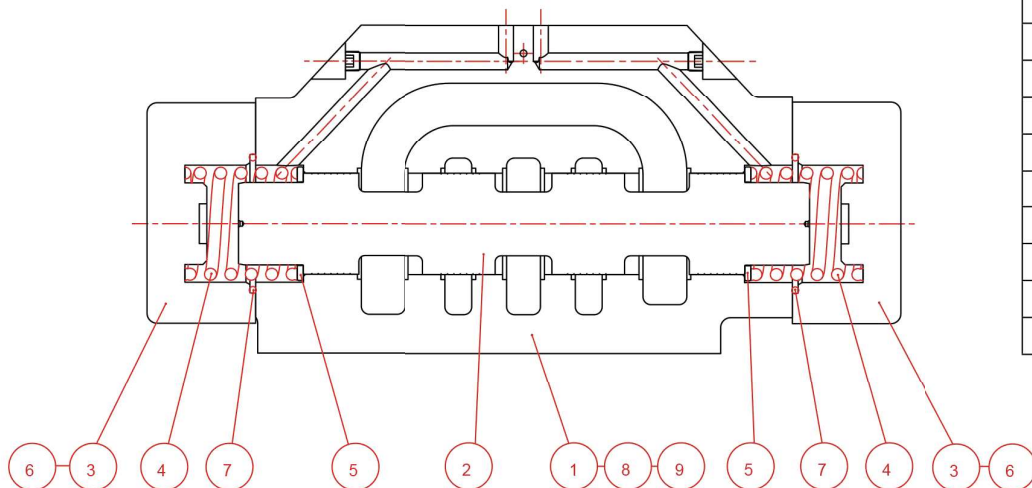
10: Locating pin

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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