



# Bell Hydromatics

Solenoid Operated

DSG-03-AC



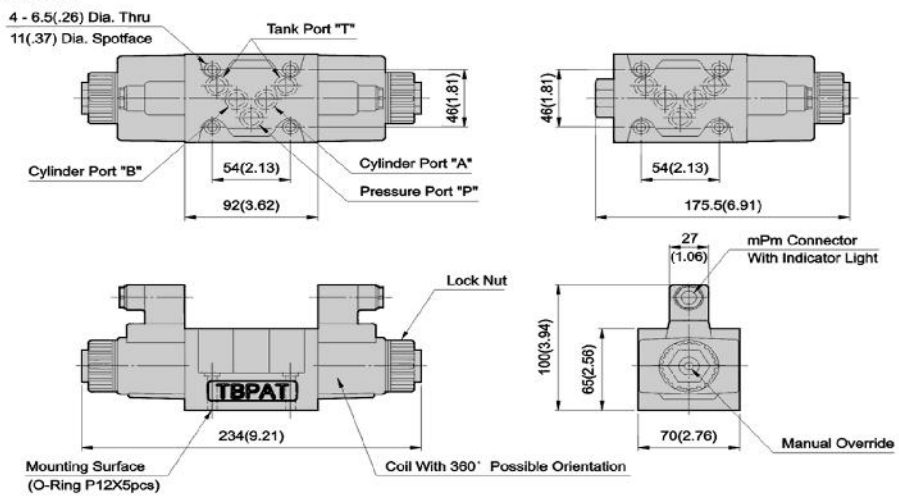
## Features:

- High Flow rate upto 120 lpm (31.7 USgpm)
- Maximum Operating pressure upto 315 bar (4500 PSI)
- Long service life with average durability of 50 million spool shifts.

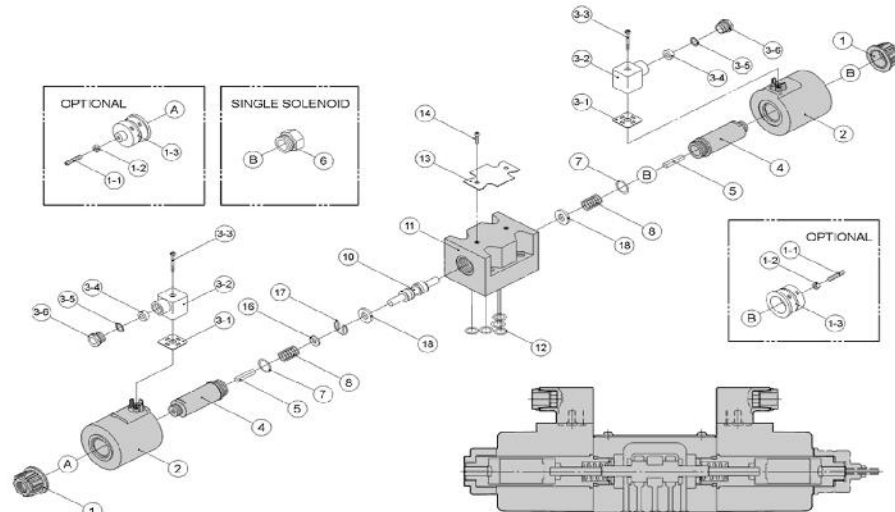
**Technical Specifications**

Spool Type & Graphic Symbols		DSG – 03 (3/8")	
Symbols	Model Number	Rated Flow Capacity	Maximum Flow Capacity
	DSG-03-2B2-**	70 lpm (18.5 USgpm)	120 lpm (31.7 USgpm)
	DSG-03-2B3-**		
	DSG-03-2B8-**		
	DSG-03-2D2-**		
	DSG-03-2D3-**		
	DSG-03-3C2-**		
	DSG-03-3C3-**		
	DSG-03-3C4-**		
	DSG-03-3C40-**		
	DSG-03-3C7-**		
	DSG-03-3C9-**		
	DSG-03-3C10-**		
	DSG-03-3C11-**		
	DSG-03-3C12-**		
	DSG-03-3C5-**	70 lpm (18.5 USgpm)	100 lpm (26.4 USgpm)
	DSG-03-3C6-**		
	DSG-03-3C60-**		
<b>Max. Operating Pressure (P.AB) (bar)</b>		315 (4500 PSI)	
<b>Max. Operating Pressure 3C5/3C6 Types (bar)</b>		250 (3600 PSI)	
<b>Permissible Back Pressure (T) (bar)</b>		160 (2300 PSI)	
<b>Weight (Kgs)</b>	Double Solenoid	4.0	
	Single Solenoid	3.3	
<b>Switching Frequency (times/min)</b>		240	
<b>Hydraulic Fluids</b>		Use Hydraulic Fluids Equivalent to ISO VG32 or VG46	
<b>Operating Temperature Range (°C)</b>		-15 ~ +70 (+5 ~ +160 °F)	
<b>Operating Viscosity (cSt)</b>		15 ~ 400 (80 ~ 1800 SSU)	
<b>Filtration</b>		25 Microns Absolute or Finer	

### Dimensions

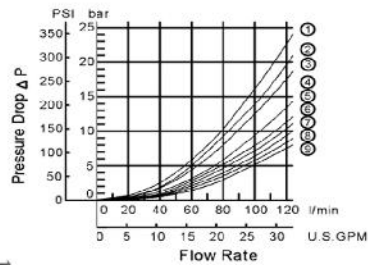


### Assembly

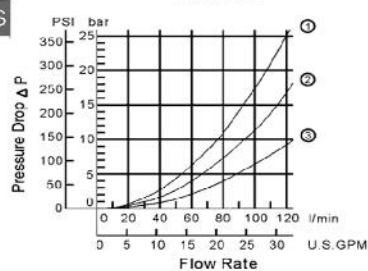


### Performance Graphs

#### DSG-03



#### DSG-03-S



Series	Spool Type	Pressure Drop Curve Number			
		P→A	B→T	P→B	A→T
DSG-03	3C2	7	7	7	7
	3C3	9	9	9	9
	3C4	7	8	7	8
	3C40	7	7	7	7
	3C60	6	5	6	5
	3C9	9	7	9	7
	3C10	7	8	7	7
	3C12	7	7	7	8
	2D2	4	3	6	6
	2B2	2	1	7	7
2B3	3	2	9	9	
2B8	6	-	5	-	

Series	Spool Type	Pressure Drop Curve Number			
		P→A	B→T	P→B	A→T
DSG-03-S	3C2	2	2	2	2
	3C4	2	2	3	3
	2B2	1	2	2	2

Graphs based on fluid viscosity of 35 cSt(162 SSU)

### Solenoid Specifications

Voltage (V)		AC 110V		AC 220V	
Frequency (Hz)		50	60	50	60
DSG (03) 3/8"	Starting Current (A)	5.37	5.03	2.69	2.52
	Holding Current (A)	0.70	0.75	0.30	0.35

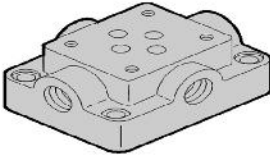
### Valve Response Capacity

Working Direction	Energisation	Spring Back
Spring Centered Type (3C*)	0.05 ~ 0.025	0.005 ~ 0.030
No Spring Type (2D*)	0.010 ~ 0.020	—
Spring Offset Type (2B*)	0.01 ~ 0.02	0.010 ~ 0.030

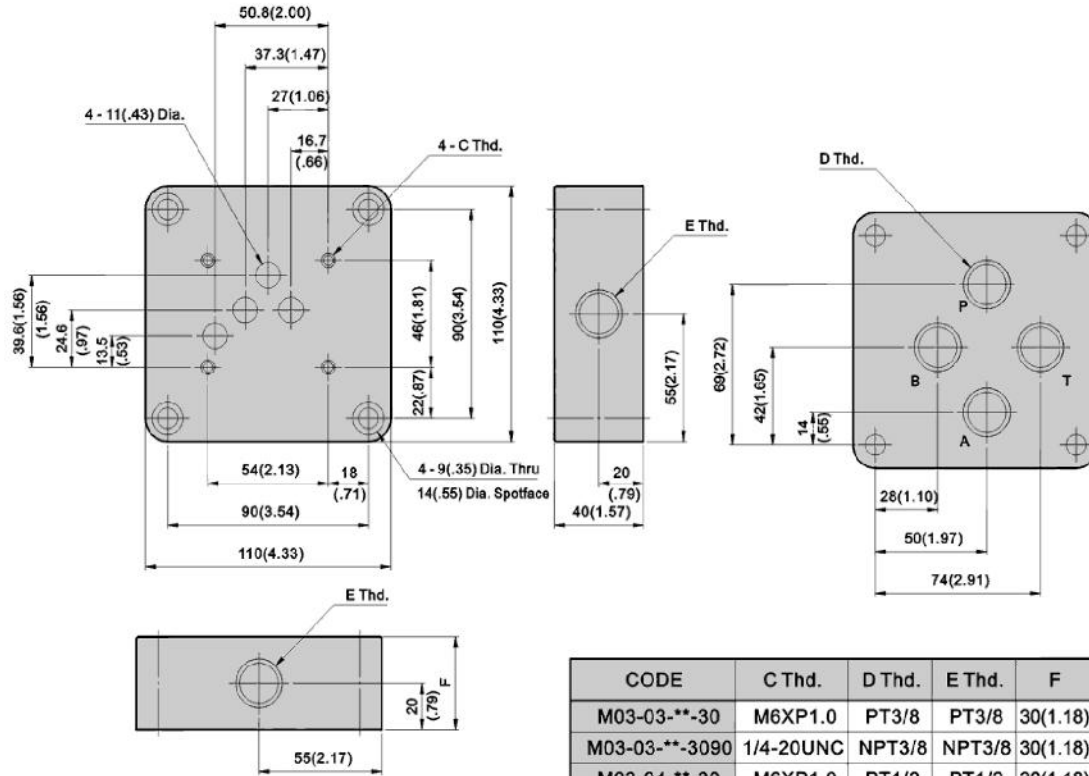
- Above response time test condition based on 140 bar (2000 psi), 30 lpm (7.9 USgpm).
- Changeover response time changes a little by test condition (pressure, flow, viscosity... etc.).

### Subplates

#### Ordering Code

M03	03	4B	36
Series Number	Port Size	Port Position	Design No.
	02: 1/4"	4S: Four side ports (A,B,P,T)	36: with PT thread
	03: 3/8"	4B: Four back ports (A,B,P,T)	
	04: 1/2"	2S2B: Two ports (A,B) in side and Two ports (P,T) in back.	
	06: 3/4"	3S1B: Three ports (A,B,P) in side and one port (T) in back.	
	10: 1-1/4"	3S1B2: Three ports (A,B,P) in side (A+B on one side) and one port (T) in back.	
		4S4B: Four ports (A,B,P,T) in side and four ports (A,B,P,T) in back and supplied with 4 pcs plugs.	

#### Subplate Dimensions



" F " is for port position " 4B " type only.

#### Ordering Code

DSG	3C2	N	03	A2	36
Series No.	Spool Type	Electrical Conduit Type	Valve Size	Coil Voltage	Design No.
DSG	Spring centered 3 Position (3C94, 3C60, 3C6, 3C3 etc.)	N: DIN connector with light.	03 – 3/8" (NFPA-D05)	A1: AC 100V(50/60Hz) AC 110V(60Hz)	36: with DIN 912 bolts
	Spring Offset 2 Position(2B2, 2B3, 2B8, 2B29 etc.)			A2: AC 200V(50/60Hz) AC 230V(60Hz)	
	Spring Detented 2 Position(2D2, 2D3 etc.)			A3: AC 110V(50Hz)	
	For complete list see Spool Types tab below			A4: AC 230V(50Hz)	
				A5: AC 240V(50Hz)	