

## DN3 SERIES BALL SEATED HYDRAULIC SOLENOID PILOT VALVE



Specifically designed for Severe Offshore Environments
Certified for Zone 1, Class 1 Hazardous Areas

ATEX 94/9/EC

M.T.B.F., SFF, PFD and SIL Data (Available upon request)

Easy Installation, Repair and Replacement
Ambient Temperature Range -50°C to +60°C
Low Power Consumption (3.5 & 8 Watts)
316 Stainless Steel Construction
Wide range of operators available
1140 bar Max Operating Pressure



• 5 litres/min

• Leak tight

#### **General Description**

The DN3 is a ball seated hydraulic control valve. The stainless steel seat and ceramic ball design ensures a leak tight shut off. The DN3 valve design incorporates a balanced internal piloting system and a lever mechanism to enable low powered operators to switch the valve at high pressures.

The DN3 valve features an 'O' Ring interface that enables it to be fitted with a ¼"NPT ported subplate as standard, or manifold mounted to reduce pipework, fittings, weight and space. This interface also allows direct mounting of the DN3 valve to the larger pilot-operated DN5, whereby increasing the flow capacity up to 200L/min. (Please consult factory for further information).

By removing just 4 bolts the valve can be dismounted without disturbing pipework and possibly contaminating the hydraulic system. Blanking or flushing plates can also be supplied.



# **DN3 SERIES BALL SEATED HYDRAULIC SOLENOID PILOT VALVE**

### **Ambient Temperature Range**

- Standard: -20°C to +60°C (-4°F to +140°F)
- Low temperature option: -50°C (-58°F)

### **Ingress Protection**

• IP66/NEMA 4X

### Filtration

Recommended 10 micron absolute

#### **Construction Materials**

- Valve bodies and subplates: 316L Stainless Steel
- Wetted parts: various grades of stainless steel/ceramic
- Fasteners: A4, grade 80 stainless steel
- Springs: stainless steel

### **Protection Class**

- Exd IIC T6 at 60°C
- Exd IIC T5
- EExd IIb T4
- EExde IIb T4/T6

### **Power Consumption**

• 3.5 & 8 watts

### **Operating Pressure Range**

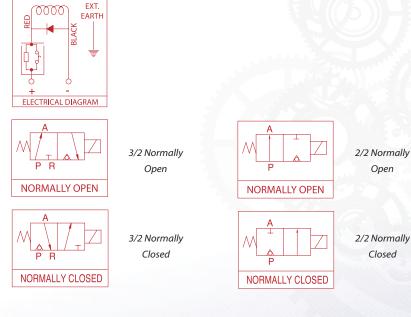
• 0 to 1140 bar depending on operator type

## **Operating Medium**

Open

Closed

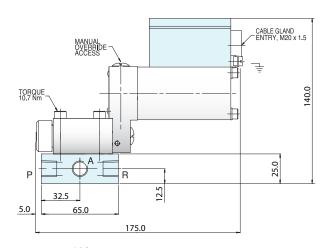
- Fluids Suitable for use with Mineral Oils, Water Glycols, Methanol and Fresh Water
- Gases Air, Natural Gas, and Nitrogen

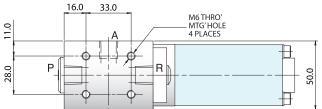


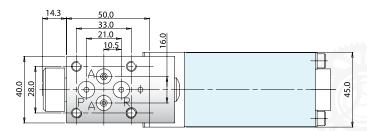
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- EExme II T6

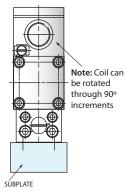


# DN3 SERIES BALL SEATED SCHEMATICS







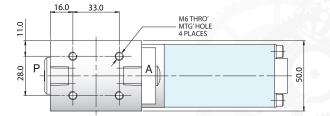


CERTIFICATION OPTIONS AVAILABLE

3/2 SUBPLATE MOUNTED ALL PORTS ¼"NPT WEIGHT 3.0 KGS

3/2 'O' Ring Interface Weight 2.5kg

	Port	Dia	'O' Ring
	P AND R	3.0	9.25 x 1.78
2	А	3.0	6.07 x 1.78



MOUNTED ALL PORTS ¼"NPT WEIGHT 3.0 KGS

2/2 SUBPLATE

#### 2/2 'O' Ring Interface Weight 2.5kg

Port	Dia	'O' Ring			
P AND A	3.0	9.25 x 1.78			

												DN03 - 5l/min	Valve Orifice Size & Nominal Flowrates (Water Glycol @ 10 Bar AP)	
												$\begin{array}{c c} 2 = 250 & 5 = 690 \\ 3 = 345 & 6 = 1140 \\ 4 = 400 & 7 = 1035 \end{array}$	Max Operating Pressure (Bar)	
												2 3 4	No. of Ports	
												2	No. of Positions	
									2 - 3 -	N/C N/O Diverto 4/2 spri		5 - 4/3 open centre 7- Universal	FUNCTION	
											A = nor	block before bleed	Block Before Bleed	
	ſ									1 = Ga 2 = Oil		Vater Dil & Water Glycol	Operating Medium	
		1 = Nitrile3 = Flurosilicone (Low Temp)2 = Viton4 = Deirin (gases)							SEALS					
D E = K1 K2 K3 L = N P =	= EExme = EExme I = EExd 2 = EExd 3 = EExd = EExde = Low p = Mediu	e II T6 3 II T4 8 IIb T4 3 IIC T6 3 IIC T4 8 IIC T4 8 IIb T4/T ressure m press	Solenoid (DC & AC voltage)X = Plunger (adjustable)6 3.5 watt solenoid ATEX II 2G - UL/CSA/INMETROY1 = Fusible Bulb = 57°C4 8 watt solenoid ATEX II 2G - UL/CSA/INMETROY2 = Fusible Bulb = 68°C74 33 watt solenoid ATEX II 2G - UL/CSA/INMETROY3 = Fusible Bulb = 79°C76 3.5 watt solenoid ATEX II 2G - UL/CSA/INMETROY4 = Fusible Bulb = 93°C74 8.0 watt solenoid ATEX II 2G - UL/CSA/INMETROY4 = Fusible Bulb = 93°C74 76 13 watt Non AtexY5 = Fusible Bulb = 141°C74/76 13 watt Non AtexZ = Special Operatorwre pilot operatorwre pilot operator						Solenoid Operators					
										B C D E	= 12V dc = 24Vdc = 48V dc = 110V dc = 220V dc = 110V 50 H	G = 110V 60 Hz H = 120V 60Hz J = 125V 50Hz K = 240V 50Hz 0 = No Voltage	Voltage	
			2							) = Manı I = Hydr ) = Manı	ual Detent aulic Over-		Additional Features	
										ice for n ate Mou		subplate mounting	Interface	
					1.1							0 = valve only		
							F		1.7			1 = 1/4''	Port Size	
											0 = N 1 = 1 2 = p	1 = 1/4" 0 = Valve Only 1 = NPT	Size	