D08 Solenoid Controlled, Pilot Operated Valves

- Available in 4 Way 2 & 3 Position
- Various Spool Configurations and Voltages
- Nominal Flow Rates up to 70 gpm
- Same Day Shipments

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## Model Code Breakdown

### WF - DG5- ** ** *(*)- -(*)-(E) - ( ) ( )- ( ) M-(S*) * *(**) * *(L)-** 5- *** 60/70

1. **WF** - FluiDyne brand

2. **Series Designation**
   - **D** - Directional control valve
   - **G** - Manifold or subplate mounted
   - **5** - Solenoid controlled, pilot operated

3. **Interface**
   - **S8** - D08
   - **SH8** - D08H

4. **Spool Type**
   - **Code**
   - **Center position**
     - 0 - Open to T all ports
     - 1* - Open P & A to T, closed B
     - 2 - Closed to T all ports
     - 3 - Closed P & B, open A to T
     - 4 - Tandem P to T, closed to P crossover
     - 6 - Closed P only, open A & B to T
     - 7 - Open P to A & B, closed T
     - 8 - Tandem P to T, open crossover
     - 9* - Open to T all ports over tapers
     - 11* - Open P & B to T, closed A
     - 31 - Closed P & A, open B to T
     - 33 - Closed P, open A & B to T over tapers

5. **Spool/Spring Arrangement**
   - **A** - Spring offset to A port
   - **B** - Spring centered, solenoid A removed
   - **C** - Spring centered

6. **Left Hand Assembly**
   - **L** - Left hand, single solenoid on (For right hand assembly P to A port when solenoid A is energized.)
   - **Blank** - Omit if not required

7. **Manual Override**
   - **Blank** - Plain override solenoid ends only

8. **Response Type**
   - **X** - Fast response
   - **Blank** - Standard low shock models

9. **Spool Control Modifications**
   - **1** - Stroke adjustment both ends
   - **2** - Pilot choke (dual) adjustment
   - **3** - Pilot choke and stroke adjustment
   - **7** - Stroke adjustment A port end only
   - **8** - Stroke adjustment B port end only
   - **2-7** - Dual pilot choke and stroke adjustment A port end only
   - **2-8** - Dual pilot choke and stroke adjustment B port end only
   - **Blank** - Omit if not required

10. **Pilot Pressure**
    - **Blank** - Internal pilot pressure
    - **E** - External pilot pressure

11. **Pilot Drain**
    - **Blank** - External pilot drain
    - **T** - Internal pilot drain

12. **Pressure Port Check Valve**
    - **K** - 5 psi cracking pressure
    - **R** - 50 psi cracking pressure
    - **S** - 75 psi cracking pressure
    - **Blank** - Omit if not required

13. **Solenoid Energization Identity**
    - **V** - Solenoid identification determined by position of solenoid (solenoid A at port A end and/or solenoid B at port B end)
    - **Blank** - Standard arrangement for ANSI B93.9 (energize solenoid A for flow P to A port)
    - (Code V for any valve with code 4 or code 8 spool)

14. **Flag Symbol**
    - **M** - Electrical options and features

15. **Spool Indicator Switch**
    - **S3** - Normally open (available on valves with code P* only)
    - **S4** - Normally closed (available on valves with code P* only)
    - **S5** - Free leads (available on valves with coil type code F only)
    - **S6** - LVDT type DC switch

16. **Coil Type**
    - **U** - ISO 4400
    - **F** - Flying Lead

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* Only Available in Reman

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**Model Code Breakdown Continues on the Next Page!**
Model Code Breakdown (continued)

WF - DG5- ** * (*) -(-*)(E) - (I) (*)- ( ) M-(S*) * (**) * (L)-** 5- *** 60/70

17 Electrical Connections
(Code F coil only)
T* – Wired terminal block
PA*– Instaplug male receptacle only
PB*– Instaplug male & female receptacle
PA3 – Three pin connector
PA5 – Five pin connector
Blank – Omit if not required

18 Housing
(Code F coil only)
W – 1/2 NPT thread wiring housing
Blank – Omit if not required

19 Electrical Options
(Code U coil only)
Blank – ISO with fitted plug and lights

20 Solenoid Indicator Lights
(Code F coil with code T electrical connections only)
L – Indicator lights
Blank – Omit if not required

21 Coil Identification
A* – 110V AC 50 Hz
B – 110V AC 50 Hz/120V AC 60 Hz*
C* – 220V AC 50 Hz
D – 220V AC 50 Hz/240V AC 60 Hz*
G – 12 VDC
H – 24 VDC
DJ* – 98 VDC
P* – 110 VDC

22 Pilot Valve Tank Pressure Rating
2* – 10 bar (145 psi) WFDG4V3S-60 with S3, S4, or S5 spool indicator switch
5 – 100 bar (1450 psi) WFDG4V3S-60
6 – 160 bar (2300 psi) with WF4WE6-6X AC solenoids
7 – 210 bar (3000 psi) WF4WE6-6X with DC solenoids

23 Pilot Valve Port Orifices
Code Orifice diameter
*00 – Solid plug
*03 – 0,30 mm (0.012 in)
*06 – 0,60 mm (0.024 in)
*08 – 0,80 mm (0.030 in)
*10 – 1,00 mm (0.040 in)
*13 – 1,30 mm (0.050 in)
*15 – 1,50 mm (0.060 in)
*20 – 2,00 mm (0.080 in)
*23 – 2,30 mm (0.090 in)
Blank – Omit if not required
(* = P, T, A, and/or B as required)

24 Design Number
60 – WFDG4V3S-60 Pilot Valve (Std performance)
70 – WF4WE6-6X Pilot Valve (High performance)

Valves should be installed in the horizontal position! Filtered hydraulic oil should be at least 20 micron.

* Only Available in Reman

<table>
<thead>
<tr>
<th>Technical Data for Pilot Pressure</th>
<th>NG Size</th>
<th>22</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Oil Supply X External</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-position valve spring-centered</td>
<td>psi</td>
<td>152</td>
<td>188</td>
</tr>
<tr>
<td>3-position valve, pressure-centered</td>
<td>psi</td>
<td>-</td>
<td>261</td>
</tr>
<tr>
<td>2-position valve with spring end position</td>
<td>psi</td>
<td>159</td>
<td>188</td>
</tr>
<tr>
<td>2-position valve with hydraulic end position</td>
<td>psi</td>
<td>116</td>
<td>116</td>
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<tr>
<td>Pilot Oil Supply X Internal</td>
<td>psi</td>
<td>65</td>
<td>65</td>
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</table>
Spool Type and Spring Mechanism

<table>
<thead>
<tr>
<th>2C</th>
<th>2B</th>
<th>2BL</th>
<th>2A</th>
<th>0C</th>
<th>0B</th>
<th>0BL</th>
<th>0A</th>
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</thead>
<tbody>
<tr>
<td>6C</td>
<td>6B</td>
<td>6BL</td>
<td>6AL</td>
<td>7C</td>
<td>7B</td>
<td>7BL</td>
<td>8C</td>
</tr>
<tr>
<td>8C</td>
<td>8B</td>
<td>8BL</td>
<td>8AL</td>
<td></td>
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</tbody>
</table>

Function code 8C spool in middle position P to T

<table>
<thead>
<tr>
<th>PSI</th>
<th>Flow L/min (GPM)</th>
<th>MEGA</th>
<th>Switching Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>203</td>
<td>100 (26)</td>
<td>1.4</td>
<td>2C 1 1 1 3</td>
</tr>
<tr>
<td>174</td>
<td>200 (52)</td>
<td>1.2</td>
<td>7C 1 4 3 3</td>
</tr>
<tr>
<td>145</td>
<td>300 (79)</td>
<td>1.0</td>
<td>8C 3 1 2 4</td>
</tr>
<tr>
<td>116</td>
<td>400 (105)</td>
<td>0.8</td>
<td>0C 4 4 3 4</td>
</tr>
<tr>
<td>87</td>
<td>500 (132)</td>
<td>0.6</td>
<td>6C 2 2 3 5</td>
</tr>
<tr>
<td>58</td>
<td>600 (158)</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td></td>
<td>0.0</td>
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</tr>
</tbody>
</table>

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**Pilot Oil & Drain Plugging**

**DG5S8 (NG25)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Plug screw M6, 3 A/F - pilot oil drain</td>
</tr>
<tr>
<td>2</td>
<td>Plug screw M6, 3 A/F - pilot oil supply</td>
</tr>
<tr>
<td>3</td>
<td>Pilot Valve</td>
</tr>
<tr>
<td>4</td>
<td>Main Valve</td>
</tr>
<tr>
<td>5</td>
<td>End Cover</td>
</tr>
</tbody>
</table>

**Pilot Oil Supply**
- External: 2 closed
- Internal: 2 open

**Pilot Oil Drain**
- External: 1 closed
- Internal: 1 open

NG10 and NG16: 35 Nm [25.8 ft-lbs]; NG25: 68 Nm [50.2 ft-lbs]

Tightening torques for cover mounting screws

**Valve Model Code Additions:**

- Blank = Int. Pilot
- E = Ext. Pilot
- Blank = Ext. Drain
- T = Int. Pilot

**Type ET:**
The pilot oil is supplied externally via channel X from a separate pressure supply. The pilot oil is drained internally via channel T to the tank. Ports X and Y in the subplate are plugged.

**Type E:**
The pilot oil is supplied externally via channel X from a separate pressure supply. The pilot oil is drained externally via channel Y to the tank. Port X in the subplate is plugged.

**Type T:**
The pilot is supplied internally from channel P of the main valve. The pilot oil is drained internally via channel T to the tank. Port Y in the subplate is plugged.
**Direct Current Din Plug**

![Diagram of Direct Current Din Plug]

**Direct Current Wire Box**

![Diagram of Direct Current Wire Box]

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**DO8 Drawings**

**Alternating Current Din Plug**

[Diagram of Alternating Current Din Plug]

② Two positions Electrical operated directional control valve

**Alternating Current Wire Box**

[Diagram of Alternating Current Wire Box]

① Two positions Electrical operated directional control valve

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