

■ Model Number Designation

| F-   | S-                            | DSHG   | -06        | -2                    | B                                | 2   | A   | -C2                           | -E   | T                              |                                |
|--|-------------------------------|--|------------|-----------------------|----------------------------------|---|---|-------------------------------|--|--------------------------------|--------------------------------|
| Special Seals  | Type                          | Series Number  | Valve Size | No. of Valve Position | Spool-Spring Arrangement         | Spool Type  | Special Two Position Valve                | Models with Pilot Choke Valve | Pilot Connection   | Drain Connection               |                                |
| <b>F:</b><br>For Phosphate Ester Type Fluids<br>(Omit if not required) | <b>None:</b><br>Standard Type | <b>DSHG:</b><br>Solenoid Controlled Pilot Operated Directional Valve, Sub-plate Mounting | 01         | 3                     | C: Spring Centred                | 2, 3, 4<br>40, 5, 60<br>7, 9, 10<br>11, 12                      | —   | —                             | <b>C1:</b><br>With C1 Choke<br><br><b>C2:</b><br>With C2 Choke<br><br><b>C1C2:</b><br>With C1 & C2 Choke<br><br>(Omit if not required) | <b>None:</b><br>Internal Pilot | <b>None:</b><br>External Drain |
|  |                               |  |            | 2                     | B: Spring Offset                 | 2, 3, 4<br>40, 7  | —   |                               |  |                                |                                |
|  |                               |  | 03         | 3                     | C: Spring Centred                | 2, 3, 4<br>40, 5, 60<br>7, 9, 10<br>11, 12                      | —   |                               |  |                                |                                |
|  |                               |  |            | 2                     | N: No-Spring                     | 2<br>3<br>4<br>40<br>7  | —   |                               |  |                                |                                |
|  |                               |  | 04         | 3                     | C: Spring Centred                | 2, 4, 40<br>60, 10, 12<br>(3, 5, 6) <sup>*1</sup><br>(7, 9, 11) | —   |                               |  |                                |                                |
|  |                               |  |            | 2                     | N: No-Spring                     | 2, 4, 40<br>(3, 7) <sup>*1</sup>                                | A <sup>*2</sup><br>(Omit if not required) |                               |  |                                |                                |
|  | 06                            |  | 3          |                       | H: Pressure Centred              | 2, 4, 40<br>60, 10, 12<br>(3, 5, 6) <sup>*1</sup><br>(7, 9, 11) | —   |                               |  |                                |                                |
|  |                               |  |            | C: Spring Centred     | 2, 4, 40<br>(3, 7) <sup>*1</sup> | A <sup>*2</sup><br>(Omit if not required)                       |   |                               |  |                                |                                |
|  | 10                            |  | 2          | N: No-Spring          | 2, 4, 40<br>(3, 7) <sup>*1</sup> | A <sup>*2</sup><br>(Omit if not required)                       |   |                               |  |                                |                                |
|  |                               |  |            | B: Spring Offset      | 2, 4, 40<br>(3, 7) <sup>*1</sup> | A <sup>*2</sup> B <sup>*2</sup><br>(Omit if not required)       |   |                               |  |                                |                                |

Note: In spool type “3”, “5”, “6”, “60”, and “7”, the combination applicable between pilot system and drain system is as described in the table below.

| Pilot Connection   | Drain Connection                     | Care in Application   |
|--------------------|--------------------------------------|---|
| Internal Pilot     | External Drain                       | Hold back pressure in the tank line so that the difference between pilot pressure and drain pressure is always more than minimum required pilot pressure. |
|                    | Internal Drain (T)                   | Combination is not applicable   |
| External Pilot (E) | External Drain<br>Internal Drain (T) | No restrictions in the combination on us  |

| -R2   | -A100   | -C                                   | -H                             | -N  | -53           | -*  | -L                                   |                                    |  |  |
|---|---|--------------------------------------|--------------------------------|---|---------------|---|--------------------------------------|------------------------------------|--|--|
| Spool Control <sup>★3</sup><br>Modification<br>(Omit if not required) | Coil Type   | Manual Override of Pilot Valve       | Bult-in Orifice for Pilot Line | Type of Electrical Conduit Connection                       | Design Number | Design Standard   | Models with Reverse Mtg. of Solenoid |                                    |  |  |
| —   | AC:<br><b>A100</b> , <b>A200</b><br><b>A120</b> , <b>A240</b> | None :<br>Manual Override Pin        | —                              | None:<br>Terminal Box Type                                  | <b>14</b>     | None:<br>Japanese Standard "JIS"                              | —                                    |                                    |  |  |
|   | DC:<br><b>D12</b> , <b>D24</b><br><b>D48</b>                  |                                      |                                |   |               |   |                                      | <b>L</b><br>(Omit if not required) |  |  |
| <b>R2</b> :<br>With Stroke Adjustment,<br>Both Ends                   | AC → DC<br><b>R100</b> , <b>R200</b>                          | <b>C</b> :<br>Push Button & Lock Nut | —                              | N:<br>Push-in Connector Type                                | <b>14</b>     | 90:<br>N. American Design Standard                            | —                                    |                                    |  |  |
| <b>RA</b> :<br>With Stroke Adjustment,<br>Port "A" End                |   |                                      |                                |   |               |   |                                      | <b>L</b><br>(Omit if not required) |  |  |
| <b>RB</b> :<br>With Stroke Adjustment,<br>Port "B" End                |   |                                      |                                |   |               |   |                                      | <b>L</b><br>(Omit if not required) |  |  |
|   | AC:<br><b>A100</b> , <b>A200</b><br><b>A120</b> , <b>A240</b> |                                      | —                              | N1:<br>Push-in Connector with Indicator Light <sup>★4</sup> | <b>52</b>     | None:<br>Japanese Standard "JIS" & European Design Standard   | —                                    |                                    |  |  |
|   | DC:<br><b>D12</b> , <b>D24</b><br><b>D48</b>                  |                                      |                                |   |               |   |                                      | <b>L</b><br>(Omit if not required) |  |  |
| <b>R2</b> : With Stroke Adj., Both Ends                               | AC → DC<br><b>R100</b> , <b>R200</b>                          |                                      |                                |   |               |   |                                      |                                    |  |  |
| <b>RA</b> : With Stroke Adj., Port "A" End                            |   |                                      |                                |   |               |   | <b>H</b> :<br>Refer to <sup>★5</sup> |                                    |  |  |
| <b>RB</b> : With Stroke Adj., Port "B" End                            |   |                                      |                                |   |               |   |                                      |                                    |  |  |
| <b>P2</b> : With Pilot Piston, Both Ends                              |   |                                      | —                              |   | <b>53</b>     | 80:<br>European Design Standard (Applicable only for DSHG-01) | —                                    |                                    |  |  |
| <b>PA</b> : With Pilot Piston, Port "A" End                           |   |                                      | —                              |   | <b>43</b>     | 90:<br>N. American Design Standard                            | —                                    |                                    |  |  |
| <b>PB</b> : With Pilot Piston, Port "B" End                           |   |                                      |                                |   |               |   | <b>L</b><br>(Omit if not required)   |                                    |  |  |

- ★1. Shekless type (S-DSHG) are not available for spool type marked ( ).
- ★2. As for the details of the valve using the neutral position and the side position (either SOL a or SOL b side), please refer to [page 391](#). Furthermore, the spool types other than "2", "4", "40" (3, 7) are also available.
- ★3. In spool-spring arrangement "H" (Pressure centred models), the valves with stroke adjustment (R\*) and pilot-piston (P\*) are not available.
- ★4. NI stands for Plug-in connector with solenoid indicator light. NI is not available for R-type solenoids.
- ★5. In spool-spring arrangement "H" (pressure centred models), in case the pilot pressure is more than 10 MPa (1450 PSI), please specify that the valve should have the built-in orifice to the pilot line.

In the table above, the symbols and numbers highlighted with shade represent the optional extras. The valves with model number having such optional extras are handles as options, therefore please confirm the time of delivery with us before ordering.

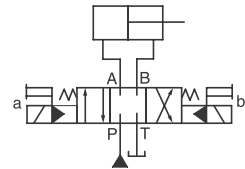
■ List of Spool Functions and Maximum Flow (DSHG-01)

| Spool Type    | Three Positions     |                                 |                      |               | Two Positions       |                                 |                      |           |
|---------------|---------------------|---------------------------------|----------------------|---------------|---------------------|---------------------------------|----------------------|-----------|
|               | Spring Centred      |                                 |                      |               | Spring Centred      |                                 |                      |           |
|               | Graphic Symbol<br>  | Maximum Flow<br>L/min (U.S.GPM) |                      |               | Graphic Symbol<br>  | Maximum Flow<br>L/min (U.S.GPM) |                      |           |
| Model Numbers | 7 MPa<br>(1020 PSI) | 14 MPa<br>(2030 PSI)            | 21 MPa<br>(3050 PSI) | Model Numbers | 7 MPa<br>(1020 PSI) | 14 MPa<br>(2030 PSI)            | 21 MPa<br>(3050 PSI) |           |
| "2"           | DSHG-01-3C2         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     | DSHG-01-2B2         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6) |
| "3"           | DSHG-01-3C3         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     | DSHG-01-2B3         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6) |
| "4"           | DSHG-01-3C4         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     | DSHG-01-2B4         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6) |
| "40"          | DSHG-01-3C40        | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     | DSHG-01-2B40        | 40 (10.6)                       | 40 (10.6)            | 40 (10.6) |
| "5"           | DSHG-01-3C5         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     |                     |                                 |                      |           |
| "60"          | DSHG-01-3C60        | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     |                     |                                 |                      |           |
| "7"           | DSHG-01-3C7         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     | DSHG-01-2B7         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6) |
| "9"           | DSHG-01-3C9         | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     |                     |                                 |                      |           |
| "10"          | DSHG-01-3C10        | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     |                     |                                 |                      |           |
| "11"          | DSHG-01-3C11        | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     |                     |                                 |                      |           |
| "12"          | DSHG-01-3C12        | 40 (10.6)                       | 40 (10.6)            | 40 (10.6)     |                     |                                 |                      |           |

Notes ) 1. Max. flow shows value at pilot pressure more than 1 MPa (150 PSI)

2. Max. flow in the table above represents the value in the flow condition of P → A → B → T (or P → B → A → T) as shown in the circuit diagram right.

In case the valve is used in the condition that either A or B port is blocked, the maximum flow differs according to a hydraulic circuit, therefore, please consult us for details.



## List of Spool Functions and Maximum Flow (DSHG-03)

### Three Positions

| Spool Type | Spring Centred |                                 |                         |                          |
|------------|----------------|---------------------------------|-------------------------|--------------------------|
|            | Graphic Symbol | Maximum Flow<br>L/min (U.S.GPM) |                         |                          |
|            | Model Numbers  | 7 MPa<br>(1020 PSI)             | 14 MPa<br>(2030 PSI)    | 25 MPa<br>(3630 PSI)     |
| "2"        | DSHG-03-3C2    | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |
| "3"        | DSHG-03-3C3    | 160 (42.3)                      | 160 (42.3)              | 160 (42.3)               |
| "4"        | DSHG-03-3C4    | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |
| "40"       | DSHG-03-3C40   | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |
| "5"        | DSHG-03-3C5    | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |
| "60"       | DSHG-03-3C60   | 160 (42.3)                      | 160 (42.3)              | 125 (33.0)<br>160 (42.3) |
| "7"        | DSHG-03-3C7    | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |
| "9"        | DSHG-03-3C9    | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |
| "10"       | DSHG-03-3C10   | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |
| "11"       | DSHG-03-3C11   | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |
| "12"       | DSHG-03-3C12   | 160 (42.3)                      | 85 (22.5)<br>160 (42.3) | 60 (15.9)<br>95 (25.1)   |

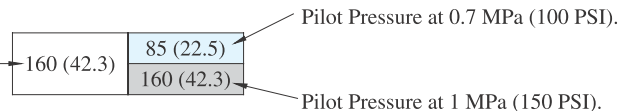
### Two Positions

| Spool Type | No-Spring      |                                 |                      | Spring Offset           |                |                                 |                      |                         |
|------------|----------------|---------------------------------|----------------------|-------------------------|----------------|---------------------------------|----------------------|-------------------------|
|            | Graphic Symbol | Maximum Flow<br>L/min (U.S.GPM) |                      |                         | Graphic Symbol | Maximum Flow<br>L/min (U.S.GPM) |                      |                         |
|            | Model Numbers  | 7 MPa<br>(1020 PSI)             | 14 MPa<br>(2030 PSI) | 25 MPa<br>(3630 PSI)    | Model Numbers  | 7 MPa<br>(1020 PSI)             | 14 MPa<br>(2030 PSI) | 25 MPa<br>(3630 PSI)    |
| "2"        | DSHG-03-2N2    | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) | DSHG-03-2B2    | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) |
| "3"        | DSHG-03-2N3    | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) | DSHG-03-2B3    | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) |
| "4"        | DSHG-03-2N4    | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) | DSHG-03-2B4    | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) |
| "40"       | DSHG-03-2N40   | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) | DSHG-03-2B40   | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) |
| "7"        | DSHG-03-2N7    | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) | DSHG-03-2B7    | 160 (42.3)                      | 160 (42.3)           | 85 (22.5)<br>160 (42.3) |

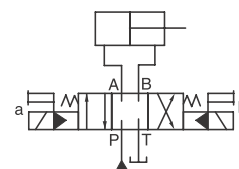
Notes: 1. The relation between max. flow and pilot pressure in the table above is as shown below.

(Example)

Maximum flow rate is constant regardless of pilot pressure.  
Pilot Pressure more than 0.7 MPa (100 PSI).



2. Max. flow in the table above represents the value in the flow condition of P → A → B → T (or P → B → A → T) as shown in the circuit diagram right.  
In case the valve is used in the condition that either A or B port is blocked, the maximum flow differs according to a hydraulic circuit, therefore, please consult us for details.



E  
Solenoid Controlled  
Pilot Operated Directional Valves

■ List of Spool Functions and Maximum Flow (DSHG-04/S-DSHG-04)

● Three Positions

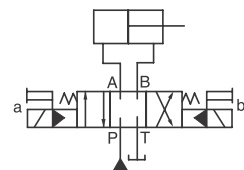
| Spool Type    | Spring Centred       |                      |                      |                        |            |
|---------------|----------------------|----------------------|----------------------|------------------------|------------|
|               | Graphic Symbol       | Maximum Flow         |                      |                        |            |
|               |                      | L/min (U.S.GPM)      |                      |                        |            |
| Model Numbers | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) |            |
| "2"           | DSHG-04-3C2          | 300 (79.3)           | 300 (79.3)           | 200 (52.8)             | 145 (38.3) |
|               | (S-)DSHG-04-3C2      | 300 (79.3)           | 250 (66.1)           | 120 (31.7)             | 110 (29.1) |
| "3"           | DSHG-04-3C3          | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3) |
| "4"           | DSHG-04-3C4          | 300 (79.3)           | 300 (79.3)           | 250 (66.1)             | 165 (43.6) |
|               | (S-)DSHG-04-3C4      | 300 (79.3)           | 300 (79.3)           | 140 (37.0)             | 110 (29.1) |
| "40"          | DSHG-04-3C40         | 300 (79.3)           | 300 (79.3)           | 200 (52.8)             | 145 (38.3) |
|               | (S-)DSHG-04-3C40     | 300 (79.3)           | 250 (66.1)           | 120 (31.7)             | 110 (29.1) |
| "5"           | DSHG-04-3C5          | 250 (66.1)           | 250 (66.1)           | 245 (64.7)             | 245 (64.7) |
| "6"           | DSHG-04-3C6          | 300 (79.3)           | 260 (68.7)           | 245 (64.7)             | 235 (62.1) |
| "60"          | DSHG-04-3C60         | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3) |
|               | (S-)DSHG-04-3C60     | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3) |
| "7"           | DSHG-04-3C7          | 300 (79.3)           | 300 (79.3)           | 200 (52.8)             | 145 (38.3) |
| "9"           | DSHG-04-3C9          | 300 (79.3)           | 300 (79.3)           | 280 (74.0)             | 250 (66.1) |
| "10"          | DSHG-04-3C10         | 300 (79.3)           | 300 (79.3)           | 200 (52.8)             | 150 (39.6) |
|               | (S-)DSHG-04-3C10     | 300 (79.3)           | 250 (66.1)           | 120 (31.7)             | 110 (29.1) |
| "11"          | DSHG-04-3C11         | 300 (79.3)           | 260 (68.7)           | 160 (42.3)             | 140 (37.0) |
| "12"          | DSHG-04-3C12         | 300 (79.3)           | 280 (74.0)           | 170 (44.9)             | 135 (35.7) |
|               | (S-)DSHG-04-3C12     | 300 (79.3)           | 250 (66.1)           | 120 (31.7)             | 110 (29.1) |

● Two Positions

| Spool Type    | No-Spring            |                      |                      |                        |               | Spring Offset        |                      |                      |                        |            |
|---------------|----------------------|----------------------|----------------------|------------------------|---------------|----------------------|----------------------|----------------------|------------------------|------------|
|               | Graphic Symbol       | Maximum Flow         |                      |                        |               | Graphic Symbol       | Maximum Flow         |                      |                        |            |
|               |                      | L/min (U.S.GPM)      |                      |                        |               |                      | L/min (U.S.GPM)      |                      |                        |            |
| Model Numbers | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) | Model Numbers | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) |            |
| "2"           | (S-)DSHG-04-2N2      | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3)    | (S-)DSHG-04-2B2      | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3) |
| "3"           | DSHG-04-2N3          | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3)    | DSHG-04-2B3          | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3) |
| "4"           | (S-)DSHG-04-2N4      | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3)    | (S-)DSHG-04-2B4      | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3) |
| "40"          | (S-)DSHG-04-2N40     | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3)    | (S-)DSHG-04-2B40     | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3) |
| "7"           | DSHG-04-2N7          | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3)    | DSHG-04-2B7          | 300 (79.3)           | 300 (79.3)           | 300 (79.3)             | 300 (79.3) |

Notes: 1. Max flow described above shown value at pilot pressure more than 0.8 MPa (120 PSI).

2. Max. flow in the table above represents the value in the flow condition of P → A → B → T (or P → B → A → T) as shown in the circuit diagram right.  
In case the valve is used in the condition that either A or B port is blocked, the maximum flow differs according to a hydraulic circuit, therefore, please consult us for details.



## List of Spool Functions and Maximum Flow (DSHG-06/S-DSHG-06)

### Three Positions

| Spool Type | Spring Centred   |                      |                      |                        |                         | Pressure Centred |                      |                      |                      |                        |
|------------|------------------|----------------------|----------------------|------------------------|-------------------------|------------------|----------------------|----------------------|----------------------|------------------------|
|            | Graphic Symbol   | Maximum Flow         |                      |                        |                         | Graphic Symbol   | Maximum Flow         |                      |                      |                        |
|            | Model Numbers    | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI)   | 31.5 MPa<br>(4570 PSI)  | Model Numbers    | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) |
| "2"        | (S-)DSHG-06-3C2  | 500 (132)            | 500 (132)            | 410 (108)<br>500 (132) | 310 (81.9)<br>500 (132) | (S-)DSHG-06-3H2  | 500 (132)            | 500 (132)            | 500 (132)            | 420 (111)<br>500 (132) |
| "3"        | DSHG-06-3C3      | 500 (132)            | 500 (132)            | 460 (122)              | 370 (97.8)              | DSHG-06-3H3      | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              |
| "4"        | (S-)DSHG-06-3C4  | 500 (132)            | 500 (132)            | 410 (108)<br>500 (132) | 310 (81.9)<br>500 (132) | (S-)DSHG-06-3H4  | 500 (132)            | 500 (132)            | 500 (132)            | 420 (111)<br>500 (132) |
| "40"       | (S-)DSHG-06-3C40 | 500 (132)            | 500 (132)            | 410 (108)<br>500 (132) | 310 (81.9)<br>500 (132) | (S-)DSHG-06-3H40 | 500 (132)            | 500 (132)            | 500 (132)            | 420 (111)<br>500 (132) |
| "5"        | DSHG-06-3C5      | 500 (132)            | 500 (132)            | 425 (112)              | 350 (92.5)              | DSHG-06-3H5      | 500 (132)            | 500 (132)            | 500 (132)            | 470 (124)<br>500 (132) |
| "6"        | DSHG-06-3C6      | 475 (125)            | 390 (103)            | 300 (79.3)             | 230 (60.8)              | DSHG-06-3H6      | 500 (132)            | 500 (132)            | 500 (132)            | 420 (111)<br>500 (132) |
| "60"       | (S-)DSHG-06-3C60 | 475 (125)            | 420 (111)            | 340 (89.8)             | 280 (74.0)              | (S-)DSHG-06-3H60 | 500 (132)            | 500 (132)            | 500 (132)            | 420 (111)<br>500 (132) |
| "7"        | DSHG-06-3C7      | 500 (132)            | 500 (132)            | 450 (119)              | 360 (95.1)              | DSHG-06-3H7      | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              |
| "9"        | DSHG-06-3C9      | 500 (132)            | 500 (132)            | 450 (119)<br>500 (132) | 360 (95.1)<br>500 (132) | DSHG-06-3H9      | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              |
| "10"       | (S-)DSHG-06-3C10 | 500 (132)            | 500 (132)            | 410 (108)<br>500 (132) | 310 (81.9)<br>500 (132) | (S-)DSHG-06-3H10 | 500 (132)            | 500 (132)            | 500 (132)            | 460 (122)<br>500 (132) |
| "11"       | DSHG-06-3C11     | 500 (132)            | 500 (132)            | 410 (108)<br>500 (132) | 310 (81.9)<br>500 (132) | DSHG-06-3H11     | 500 (132)            | 500 (132)            | 500 (132)            | 460 (122)<br>500 (132) |
| "12"       | (S-)DSHG-06-3C12 | 500 (132)            | 500 (132)            | 410 (108)<br>500 (132) | 310 (81.9)<br>500 (132) | (S-)DSHG-06-3H12 | 500 (132)            | 500 (132)            | 500 (132)            | 460 (122)<br>500 (132) |

### Two Positions

| Spool Type | No-Spring        |                      |                      |                      |                        | Spring Offset    |                      |                      |                      |                        |
|------------|------------------|----------------------|----------------------|----------------------|------------------------|------------------|----------------------|----------------------|----------------------|------------------------|
|            | Graphic Symbol   | Maximum Flow         |                      |                      |                        | Graphic Symbol   | Maximum Flow         |                      |                      |                        |
|            | Model Numbers    | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) | Model Numbers    | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) |
| "2"        | (S-)DSHG-06-2N2  | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              | (S-)DSHG-06-2B2  | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              |
| "3"        | DSHG-06-2N3      | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              | DSHG-06-2B3      | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              |
| "4"        | (S-)DSHG-06-2N4  | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              | (S-)DSHG-06-2B4  | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              |
| "40"       | (S-)DSHG-06-2N40 | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              | (S-)DSHG-06-2B40 | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              |
| "7"        | DSHG-06-2N7      | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              | DSHG-06-2B7      | 500 (132)            | 500 (132)            | 500 (132)            | 500 (132)              |

Notes: 1. The relation between max. flow and pilot pressure in the table above is as shown below.

(Example)

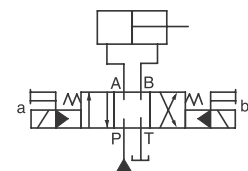
Maximum flow rate is constant regardless of pilot pressure. → 500 (132)  
 Pilot Pressure more than 0.8 MPa (120 PSI).  
 In case pressure centred models, pilot pressure is more than 1 MPa (150 PSI).

|           |           |
|-----------|-----------|
| 500 (132) | 410 (108) |
| 500 (132) | 500 (132) |

Pilot Pressure at 0.8 MPa (120 PSI).  
 In case pressure centred models, pilot pressure is more than 1 MPa (150 PSI)

Pilot Pressure at 1.5 MPa (220 PSI).

2. Max. flow in the table above represents the value in the flow condition of P → A → B → T (or P → B → A → T) as shown in the circuit diagram right.  
 In case the valve is used in the condition that either A or B port is blocked, the maximum flow differs according to a hydraulic circuit, therefore, please consult us for details.



■ List of Spool Functions and Maximum Flow (DSHG-010/S-DSHG-10)

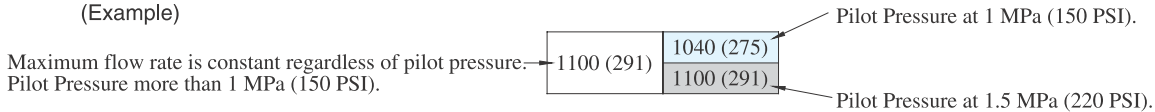
● Three Positions

| Spool Type | Spring Centred |                      |                      |                      |                          | Pressure Centred        |                      |                      |                      |                        |                          |
|------------|----------------|----------------------|----------------------|----------------------|--------------------------|-------------------------|----------------------|----------------------|----------------------|------------------------|--------------------------|
|            | Graphic Symbol | Maximum Flow         |                      |                      |                          | Graphic Symbol          | Maximum Flow         |                      |                      |                        |                          |
|            | Model Numbers  | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI)   | Model Numbers           | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) |                          |
| "2"        |                | (S-)DSHG-10-3C2      | 1100 (291)           | 1100 (291)           | 950 (251)<br>1100 (291)  | 750 (198)<br>1100 (291) | (S-)DSHG-10-3H2      | 1100 (291)           | 1100 (291)           | 1100 (291)             | 970 (256)<br>1100 (291)  |
| "3"        |                | DSHG-10-3C3          | 1100 (291)           | 1100 (291)           | 1060 (280)               | 895 (236)               | DSHG-10-3H3          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1050 (277)<br>1100 (291) |
| "4"        |                | (S-)DSHG-10-3C4      | 1100 (291)           | 1100 (291)           | 950 (251)<br>1100 (291)  | 750 (198)<br>1100 (291) | (S-)DSHG-10-3H4      | 1100 (291)           | 1100 (291)           | 1100 (291)             | 970 (256)<br>1100 (291)  |
| "40"       |                | (S-)DSHG-10-3C40     | 1100 (291)           | 1100 (291)           | 950 (251)<br>1100 (291)  | 750 (198)<br>1100 (291) | (S-)DSHG-10-3H40     | 1100 (291)           | 1100 (291)           | 1100 (291)             | 970 (256)<br>1100 (291)  |
| "5"        |                | DSHG-10-3C5          | 1100 (291)           | 1100 (291)           | 980 (259)                | 850 (225)               | DSHG-10-3H5          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1000 (264)<br>1100 (291) |
| "6"        |                | DSHG-10-3C6          | 1050 (277)           | 880 (232)            | 700 (185)                | 570 (151)               | DSHG-10-3H6          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 970 (256)<br>1100 (291)  |
| "60"       |                | (S-)DSHG-10-3C60     | 1050 (277)           | 940 (248)            | 785 (207)                | 680 (180)               | (S-)DSHG-10-3H60     | 1100 (291)           | 1100 (291)           | 1100 (291)             | 970 (256)<br>1100 (291)  |
| "7"        |                | DSHG-10-3C7          | 1100 (291)           | 1100 (291)           | 1040 (275)<br>1100 (291) | 870 (230)<br>1100 (291) | DSHG-10-3H7          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291)               |
| "9"        |                | DSHG-10-3C9          | 1100 (291)           | 1100 (291)           | 1040 (275)               | 870 (230)               | DSHG-10-3H9          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291)               |
| "10"       |                | (S-)DSHG-10-3C10     | 1100 (291)           | 1100 (291)           | 950 (251)<br>1100 (291)  | 750 (198)<br>1100 (291) | (S-)DSHG-10-3H10     | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1060 (280)<br>1100 (291) |
| "11"       |                | DSHG-10-3C11         | 1100 (291)           | 1100 (291)           | 950 (251)<br>1100 (291)  | 750 (198)<br>1100 (291) | DSHG-10-3H11         | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1060 (280)<br>1100 (291) |
| "12"       |                | (S-)DSHG-10-3C12     | 1100 (291)           | 1100 (291)           | 950 (251)<br>1100 (291)  | 750 (198)<br>1100 (291) | (S-)DSHG-10-3H12     | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1060 (280)<br>1100 (291) |

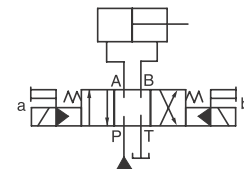
● Two Positions

| Spool Type | No-Spring      |                      |                      |                      |                        | Spring Offset  |                      |                      |                      |                        |            |
|------------|----------------|----------------------|----------------------|----------------------|------------------------|----------------|----------------------|----------------------|----------------------|------------------------|------------|
|            | Graphic Symbol | Maximum Flow         |                      |                      |                        | Graphic Symbol | Maximum Flow         |                      |                      |                        |            |
|            | Model Numbers  | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) | Model Numbers  | 10 MPa<br>(1450 PSI) | 16 MPa<br>(2320 PSI) | 25 MPa<br>(3630 PSI) | 31.5 MPa<br>(4570 PSI) |            |
| "2"        |                | (S-)DSHG-10-2N2      | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291)     | (S-)DSHG-10-2B2      | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291) |
| "3"        |                | DSHG-10-2N3          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291)     | DSHG-10-2B3          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291) |
| "4"        |                | (S-)DSHG-10-2N4      | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291)     | (S-)DSHG-10-2B4      | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291) |
| "40"       |                | (S-)DSHG-10-2N40     | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291)     | (S-)DSHG-10-2B40     | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291) |
| "7"        |                | DSHG-10-2N7          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291)     | DSHG-10-2B7          | 1100 (291)           | 1100 (291)           | 1100 (291)             | 1100 (291) |

Notes ) 1. The relation between max. flow and pilot pressure in the table above is as shown below.  
(Example)

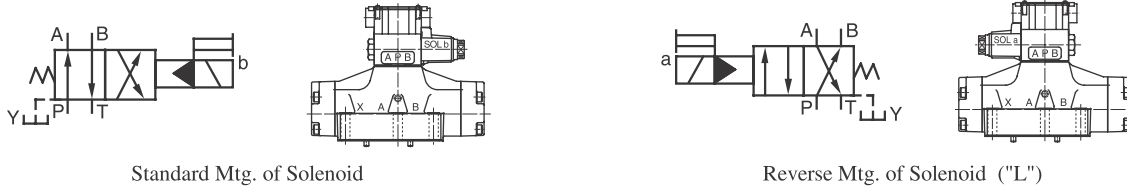


2. Max. flow in the table above represents the value in the flow condition of P → A → B → T (or P → B → A → T) as shown in the circuit diagram right.  
In case the valve is used in the condition that either A or B port is blocked, the maximum flow differs according to a hydraulic circuit, therefore, please consult us for details.



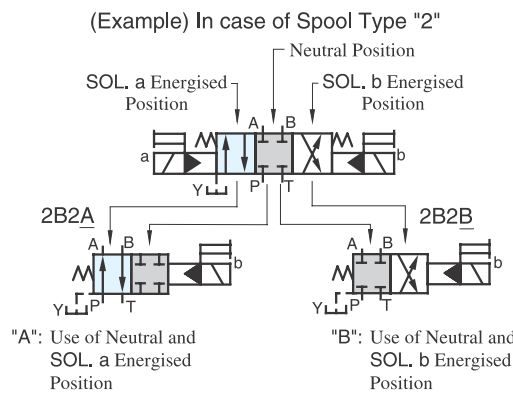
## Reverse Mounting of Solenoid.

In spring offset type, it is a standard configuration that the solenoid is mounted onto the valve in the SOL b position (side). However, in this particular spool-spring arrangement, the mounting of the solenoid onto the valve in the reverse position - SOL a side - is also available. The graphic symbol for this reverse mounting is as shown below. As for the valve type 2B\*A and 2B\*B, please refer to the explanation under the heading of "Valves Using Neutral Position and Side Position" given below.



## Valves Using Neutral Position and Side Position. (Special Two position Valve)

Besides the use of the standard 2-position valves aforementioned in the "List of Standard Models and Maximum Flow", the 3-position valves also can be used as the 2-position valves using the two of their three positions. In this case, there are two kinds of the valve available. One is the valve using the neutral position and SOL a position (2B\*A) and another is the valve using the neutral position and SOL b position (2B\*B).



| Model Numbers            | Graphic Symbols |                   | Model Numbers            | Graphic Symbols |                   | Model Numbers            | Graphic Symbols |
|--------------------------|-----------------|-------------------|--------------------------|-----------------|-------------------|--------------------------|-----------------|
|                          | Standard Mtg.   | Reverse Mtg. Type |                          | Standard Mtg.   | Reverse Mtg. Type |                          | Standard Mtg.   |
| 04<br>DSHG-06-2B*A<br>10 |                 |                   | 04<br>DSHG-06-2B*B<br>10 |                 |                   | 04<br>DSHG-06-2N*A<br>10 |                 |
| (S-)DSHG-*-2B2A          |                 |                   | (S-)DSHG-*-2B2B          |                 |                   | (S-)DSHG-*-2N2A          |                 |
| DSHG-*-2B3A              |                 |                   | DSHG-*-2B3B              |                 |                   | DSHG-*-2N3A              |                 |
| (S-)DSHG-*-2B4A          |                 |                   | (S-)DSHG-*-2B4B          |                 |                   | (S-)DSHG-*-2N4A          |                 |
| (S-)DSHG-*-2B40A         |                 |                   | (S-)DSHG-*-2B40B         |                 |                   | (S-)DSHG-*-2N40A         |                 |
| DSHG-*-2B5A              |                 |                   | DSHG-*-2B5B              |                 |                   | DSHG-*-2N5A              |                 |
| DSHG-*-2B6A              |                 |                   | DSHG-*-2B6B              |                 |                   | DSHG-*-2N6A              |                 |
| (S-)DSHG-*-2B60A         |                 |                   | (S-)DSHG-*-2B60B         |                 |                   | (S-)DSHG-*-2N60A         |                 |
| DSHG-*-2B7A              |                 |                   | DSHG-*-2B7B              |                 |                   | DSHG-*-2N7A              |                 |
| DSHG-*-2B9A              |                 |                   | DSHG-*-2B9B              |                 |                   | DSHG-*-2N9A              |                 |
| (S-)DSHG-*-2B10A         |                 |                   | (S-)DSHG-*-2B10B         |                 |                   | (S-)DSHG-*-2N10A         |                 |
| DSHG-*-2B11A             |                 |                   | DSHG-*-2B11B             |                 |                   | DSHG-*-2N11A             |                 |
| (S-)DSHG-*-2B12A         |                 |                   | (S-)DSHG-*-2B12B         |                 |                   | (S-)DSHG-*-2N12A         |                 |

E  
Solenoid Controlled Pilot Operated Directional Valves