

# **Bell Hydromatics**

Pilot Operated(DHG)

**DHG-04** 



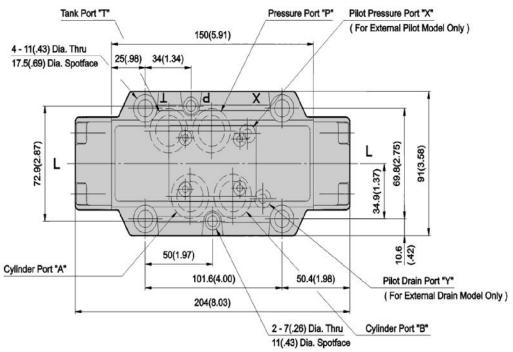
# Features:

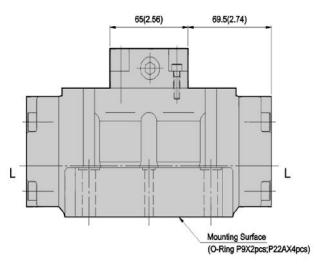
- High Flow rate upto 300 lpm (79.3 USgpm)
  Maximum Operating presuure upto 315 bar (4500 PSI)
  Long service life with average durability of 50 million spool shifts.

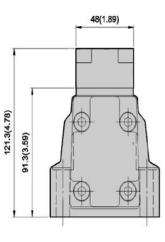
## **Technical Specifications**

| Spool Type & Graphic Symbols   |                    | DHG – 04 (1/2")                                     |                          |  |  |
|--|--------------------|---|--------------------------|--|--|
| Symbols  | Model<br>Number    | Rated Flow<br>Capacity                              | Maximun Flow<br>Capacity |  |  |
| X X I I A B  | DHG-04-2B2-**      |   |                          |  |  |
| xXH ABA  | DHG-04-2B3-**      |   |                          |  |  |
| X X I I A B Y  | DHG-04-2N2-**      |   |                          |  |  |
| x-X-AB-  | DHG-04-2N3-**      |   |                          |  |  |
| x -~ X B P T - Y   | DHG-04-3C2-**      |   |                          |  |  |
| x -~ X B T - Y   | DHG-04-3C3-**      |   |                          |  |  |
| x -^ X B Y   | DHG-04-3C4-**      | 135 lpm (35.7 USgpm)                                | 300 lpm (79.3 USgpm)     |  |  |
| x - X B T Y  | DHG-04-3C40-       |   |                          |  |  |
| x - X B Y  | DHG-04-3C7-**      |   |                          |  |  |
| x - X B Y  | DHG-04-3C9-**      |   |                          |  |  |
| x - Y  | DHG-04-3C10-       |   |                          |  |  |
| X - Y  | DHG-04-3C11-       |   |                          |  |  |
| x - Y  | DHG-04-3C12-<br>** |   |                          |  |  |
| x A B  | DHG-04-3C5-**      |   |                          |  |  |
| X TI I THE I TO Y  | DHG-04-3C6-**      | 245 lpm (64.8 USgpm)                                | 280 lpm (74.5 USgpm)     |  |  |
| $x \overset{A}{\longrightarrow} H \overset{A}{\longrightarrow} H \overset{A}{\longrightarrow} Y$ | DHG-04-3C60-       |   |                          |  |  |
| Max. Operating Pressu  | ıre (P.AB) (bar)   | 315 (4500 PSI)                                      |                          |  |  |
| Min. Required Pilo   | t Pressure         | 8 (114 PSI)   |                          |  |  |
| Max. Pilot Pressure  |                    | 250 (3600 PSI)                                      |                          |  |  |
| Max. T-Line Back Pressure (T) (bar)  |                    | 210 (3000 PSI)                                      |                          |  |  |
| Weight (Kgs)   |                    | 7.4 (16.3 lbs)                                      |                          |  |  |
| Hydraulic Fluids   |                    | Use Hydraulic Fluids Equivalent to ISO VG32 or VG46 |                          |  |  |
| Operating Temperatu  | ire Range (°C)     | -15 ~ +70 (+5 ~ +160 °F)                            |                          |  |  |
| Operating Visco  | sity (cSt)         | 15 ~ 400 (80 ~ 1800 SSU)                            |                          |  |  |
| Filtration   |                    | 25 Microns Absolute or Finer                        |                          |  |  |

#### Dimensions

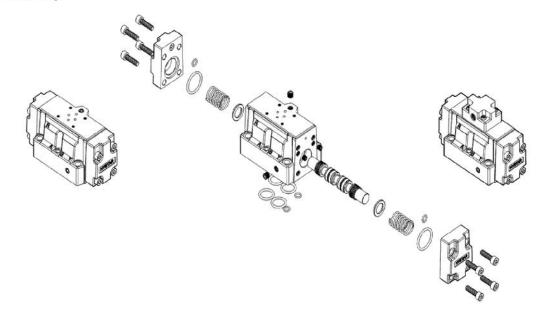






| Attachment Name    | Description   | Tightening Torque                | Code<br>30 |  |
|--------------------|---|----------------------------------|------------|--|
| Soc. Hd. Cap Screw | M6X45LgX2pcs<br>M10X45LgX4pcs                       | 12-15 Nm<br>58-72 Nm             |            |  |
| Soc. Hd. Cap Screw | 1/4-20UNCX1-3/4"LgX2pcs<br>3/8-16UNCX1-3/4"Lg X4pcs | 104-130 in.lbs<br>504-625 in.lbs | 3090       |  |

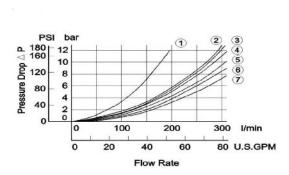
#### Assembly



## **Ordering Code**

| DHG           | 3C2   | N                             | 04                | D1                                    | 36   | *P*D   |
|---------------|---|-------------------------------|-------------------|---------------------------------------|--|--|
| Series<br>No. | Spool Type  | Electrical<br>Conduit<br>Type | Valve<br>Size     | Coil Voltage                          | Design<br>No.                              | Pilot and Drain<br>Connection  |
| DHG SDP 2     | Spring<br>centered 3<br>Position<br>(3C94, 3C60,<br>3C6, 3C3<br>etc.) |                               |                   | <u>D1:</u> DC12V<br><u>D2:</u> DC24V  | 36: with<br>DIN 912<br>bolts               | *P -> Pilot Plug<br>(1/16, 1/8, 1/4)<br>*D -> Drain Plug<br>(1/16, 1/8, 1/4) |
|               | Spring Offset<br>2<br>Position(2B2,<br>2B3, 2B8,<br>2B29 etc.)        | N: DIN                        | 04 –<br>1/2″      | <u>D3:</u> DC36V<br><u>D4:</u> DC48V  |  | <b>1P1D</b> : Internal<br>Pilot, Internal Drain                              |
|               | Spring<br>Detented 2<br>Position(2D2,<br>2D3 etc.)                    | with light.                   | (NFPA-<br>D07)    | <u>D5</u> : DC60V<br><u>D6:</u> DC72V |  | <b>1P2D:</b> Internal<br>Pilot, External<br>Drain                            |
|               | For complete  |                               |                   | <u>D14.5:</u><br>DC14.5v              |  | 2P1D: External<br>Pilot, Internal Drain                                      |
|               | Types tab<br>below  |                               | <u>D28:</u> DC28V |                                       | 2P2D: External<br>Pilot, External<br>Drain |  |

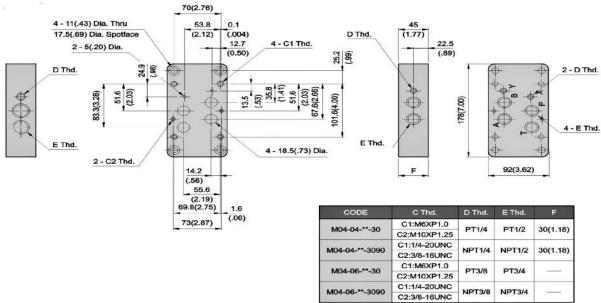
#### **Performance Graph**



| Series               | Spool | Pressure Drop Curve Number |      |            |              |      |
|----------------------|-------|----------------------------|------|------------|--------------|------|
|                      | Туре  | P→A                        | В→Т  | P→B        | A→T          | P→T  |
| DSHG-04<br>DSHG-04-S | 3C2   | (2)                        | 4(2) | <b>(2)</b> | 6(4)         | _    |
|                      | 3C3   | (5)                        | (3)  | (5)        | (5)          | 7    |
|                      | 3C4   | (2)                        | 3(3) | <b>(2)</b> | <b>(5)</b>   | -    |
|                      | 3C40  | <b>(2)</b>                 | 4(4) | <b>(2)</b> | 6(6)         | _    |
|                      | 3C5   | 7                          | 4    | (5)        | (5)          | (5)  |
|                      | 3C6   | <b>(6)</b>                 | 3(4) | <b>(6)</b> | <b>6</b> (7) | 1)(2 |
|                      | 3C60  | 7                          | (6)  | 7          | 7            | 2    |
|                      | 3C7   | 5                          | 4    | (5)        | 6            | 2-3  |
|                      | 3C9   | (5)                        | 4    | (5)        | 6            | -    |
|                      | 3C10  | <b>(2)</b>                 | 2(2) | <b>(2)</b> | <b>6</b> (4) | _    |
|                      | 3C11  | 6                          | 4    | (5)        | 6            | _    |
|                      | 3C12  | (2)                        | 4(2) | (5)(2)     | (5)          | _    |

Graphs based on fluid viscosity of 35 cSt ( 162 SSU). Notes: ( ) curve No. is for shock-less type.

#### Sub Plate



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