## Bell Hydromatics



Ordering Code

| VP5FD | -A |  |  | 5 | -A |  | 5 |  | -50 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Series No. | Shaft end pump |  |  |  | Cover end pump |  |  |  | Design No. |
|  | Outlet Flow at 3.5 bar , 1800 rpm lpm |  | Operating Pressure range bar |  | Outlet Flow at 3.5 bar, 1800 rpm lpm |  | Operating <br> Pressure range bar |  |  |
| VP5FD <br> Flange Mounting | Code | Outlet Flow | Code | Pressure Range | Code | Outlet Flow | Code | Pressure Range | $\begin{aligned} & 50: \mathrm{PT}(\mathrm{Rc}) 5080: \mathrm{PF}(\mathrm{G}) \\ & 5090: \mathrm{NPT} \end{aligned}$ |
|  | A | $\begin{aligned} & 30 \\ & \text { lpm } \end{aligned}$ | 2 | $\begin{gathered} \text { 15-35 } \\ \text { lpm } \end{gathered}$ | A | $\begin{aligned} & 30 \\ & \text { lpm } \end{aligned}$ | 2 | $\begin{aligned} & 15 \sim 35 \\ & \text { bar } \end{aligned}$ |  |
|  | B | $\begin{aligned} & 40 \\ & \text { Ipm } \end{aligned}$ | 3 | $\begin{gathered} \text { 20-70 } \\ \mathrm{Ipm} \end{gathered}$ | B | $\begin{aligned} & 40 \\ & \mathrm{Ipm} \end{aligned}$ | 3 | $\begin{aligned} & 20 \sim 70 \\ & \text { bar } \end{aligned}$ |  |
|  | Factory Setting Qmax. |  | 4 | $\begin{aligned} & \text { 50- } \\ & \text { 105bar } \end{aligned}$ | Factory Setting Qmax. |  | 4 | $\begin{aligned} & 50 \sim 105 \\ & \text { bar } \end{aligned}$ |  |
|  |  |  | 5 | $\begin{aligned} & 70- \\ & \text { 140bar } \end{aligned}$ |  |  | 5 | $\begin{aligned} & 70 \sim 140 \\ & \text { bar } \end{aligned}$ |  |
|  |  |  | Factory Setting Pmin. |  |  |  | Factory Setting Pmin |  |  |

## Operating Data

High Efficiency Operation With High Pressure.
Under the conditions of pressure 140 bar,the 5 pump is stable and highly efficient.Due to our improvement designs "THREE POINT RING" support systems.
No Vibration And Quiet.
The cam ring is specifically designed to have a special curve so the noise level (dB) is very low,even in the high pressure operations.

Sharp Characteristics And Quick Response.
Quick response displayed in both "ON-OFF" control of operation,due to use special design "BIAS
PISTON" stable and accurate operation can be attained in an instant.
Stable Flow.
Due to use new design "PRESSURE BALANCE MECHANISM" the output flow pressure control systems, the output flow is very stable even in the high pressure ranges.

Energy Saving Type.
Power loss has been reduced further by application of our highly advanced precision machining technology to assure the same high efficiency performance.As the "VP5" series with many new mechanisms of our improvement designs. And the power loss at the "dead head" has been reduced by a large degree.

Easy Testing And Maintenance.
Pressure adjusting screw, and the volume adjusting screw were located at the same side,and ensure easy testing at a glance.


Parts List:

| No. | Part Name | Specification | Quantity |
| :---: | :---: | :---: | :---: |
| 1 | Retainer Ring | R42 | 1+1 |
| 2 | Shaft Seal | TCV 224211 | 1+1 |
| 3 | Pump Body |  | 1+1 |
| 4 | Piston |  | 1+1 |
| 5 | Socket set Screw | M4×P0. $7 \times 5 \mathrm{~L}$ | 1+1 |
| 6 | Piston |  | 1+1 |
| 7 | O-Ring | 1A-P5 | 1+1 |
| 8 | O-Ring | 1A-P20 | 1+1 |
| 9 | O-Ring | 1A-P6 | 2+2 |
| 10 | Cover |  | 1+1 |
| 11 | Socket Head Cap Screw | M6xP1.Ox35L | $4+4$ |
| 12 | Socket Set Screw | M12×P1.75 $\times 25 \mathrm{~L}$ | 1+1 |
| 13 | 1 lexagon Nut | M12xP1.75 | 1+1 |
| 14 | O-Ring | 1A-P6 | 3+3 |
| 15 | Body |  | 1+1 |
| 16 | Hold |  | $1+1$ |
| 17 | Spring |  | 1 |
| 18 | O-Ring | 1A-P14 | 1 |
| 19 | Spring Retainer |  | 1+1 |
| 20 | Screw |  | 1+1 |
| 21 | Socket Set Screw | M3xP1.25x35L | 1+1 |
| 22 | Hexagon Nut | M8xP1.25 | 1+1 |
| 23 | Socket Set Screw | M5xPO.8×25L | 4+4 |
| 24 | Plug |  | 2+2 |
| 25 | Spool |  | 1+1 |
| 26 | O-Ring | 1A-P 10 | 1+1 |
| 27 | Plug |  | 1+1 |
| 28 | Slide Screw |  | 1+1 |
| 29 | O-Ring | 1A-P14 | 1+1 |
| 30 | Hexagon Nut | M16xP1.0 | 1+1 |
| 31 | Cap |  | 1+1 |
| 32 | Piston |  | 1+1 |
| 33 | Spring |  | 1+1 |
| 34 | Piston |  | 1+1 |
| 35 | O-ring | 1A-P5 | $1+1$ |
| 36 | O-Ring | 1A-P22 | 1+1 |
| 37 | Cover |  | 1+1 |


| No. | Part Name | Specification | Quantity |
| :---: | :---: | :---: | :---: |
| 38 | Sucket Head Cap Screw | M6xP1.O×25L | 4+4 |
| 39 | Socket Set Screw | M5×PO. $8 \times 10 \mathrm{~L}$ | 1+1 |
| 40 | Socket Set Screw | M1O $\times 1.5 \times 12 \mathrm{~L}$ | 1+1 |
| 41 | Plug |  | 1+1 |
| 42 | Spring Pin | $04 \times 10$ | 1+1 |
| $\begin{aligned} & 42- \\ & 1 \end{aligned}$ | Spring Pin | $04 \times 10$ | $2+2$ |
| 43 | Straight Pin | $104 \times 10$ | 2+2 |
| 44 | English Bush | DIADO(Japan)DD2225 | 1+1 |
| $\begin{aligned} & 44 \\ & 1 \end{aligned}$ | English Bush | DIADO(Japan)DD2225 | 1+1 |
| 45 | Port Plate |  | 1+1 |
| 46 | Rotorshaft(A) |  | 1 |
| $\begin{aligned} & 46- \\ & 1 \end{aligned}$ | Rotorshaft(B) |  | 1 |
| 47 | Vanes |  | 13+13 |
| 48 | Cam Ring |  | 1 |
| ${ }_{1}^{48-}$ | Cam Ring |  | 1 |
| 49 | Thrust Plate |  | 1+1 |
| 50 | O-Ring | AS568-026 | 1+1 |
| 51 | Endless Back-up Ring |  | 1+1 |
| 52 | O-Ring | AS568-034 | 1+1 |
| 53 | Endless Back-up Ring |  | 1+1 |
| 52 | O-Ring | 1A-S85 | 1+1 |
| 55 | O-Ring | 1A-PG | $2+2$ |
| 56 | Cover |  | 1 |
| 57 | Plug | 1/16" | $2+3$ |
| 58 | Spring Washer | M10 | 4+4 |
| 59 | Hexagon Head Screw | M10×P1.5×30L | 4+4 |
| 60 | O-Ring | 1A-G45 | 1 |
| 61 | O-Ring | 1A-G60 | 1 |
| 62 | Coupling |  | 1 |
| 63 | Cover |  | 1 |
| 64 | Skt.HD.cap Scr. | M10xP1.5x35L | 4 |
| 85 | Narme Plate |  | 1 |
| 65 | Fixing Screw |  | 2 |
| 67 | Woodnuff Key | NO. 608 | 1 |
| 68 | Spring Washer | M10 | 4 |
| 69 | Skt. HD.cap Scr. | M10×P1.5×30L | 4 |

## Dimensions



