## Bell Hydromatics

Variable Displacement Vane Pumps
TPF - Hi-Lo Pumps


## Ordering Code

| TPF | -VL30 |  | 2 |  | -GH |  | 2 |  | -11 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Series No. | Shaft end Pump |  | Variable Volume pressure compensated vane pump |  | Cover end Pump |  | Fixed Displacement Gear Pump |  | Design No. |
|  | Outlet Flow <br> (lpm) at 3.5 <br> bar, 1800 rpm |  | Operating Pressure range (bar) |  | Displacement (lpm) |  | Operating Pressure (bar) |  |  |
| TPF <br> Flange Mounting | Code | Outlet Flow (lpm) | Code | Pressure Range | Code | Outlet Flow | Pressure | Peak | $\begin{gathered} \text { 11: } \\ \text { PT(Rc) } \end{gathered}$ |
|  | VL30 | $\begin{gathered} 30 \\ \mathrm{Ipm} \end{gathered}$ | 1 | $\begin{gathered} 15 \sim 35 \\ \text { bar } \end{gathered}$ | GH1 | 1.09 | 210 | 250 |  |
|  | VL40 | $\begin{gathered} 40 \\ \text { lpm } \end{gathered}$ | 2 | $\begin{gathered} 30 \sim 70 \\ \text { bar } \end{gathered}$ | GH2 | 2.07 |  |  |  |
|  | Factory Setting Qmax. |  | Factory Setting Pmin. |  | GH3 | 3.08 |  |  |  |
|  |  |  | GH4 | 4.06 | $\begin{aligned} & 1180: \\ & \operatorname{PF}(\mathrm{G}) \end{aligned}$ |  |  |  |
|  |  |  | GH5 | 6.16 |  |  |  |  |
|  |  |  | GH6 | 7.67 |  |  |  |  |
|  |  |  | GH7 | 9.24 |  |  |  |  |
|  |  |  | GH8 | 10.77 | $\begin{aligned} & \text { 1190: } \\ & \text { NPT } \end{aligned}$ |  |  |  |
|  |  |  | GH9 | 12.0 |  |  |  |  |
|  |  |  | G00 | G00 type is variable vane pump only. It does not include the gear pump |  |  |  |  |  |

## Operating Data

## ROTARY DIRECTION

Clockwise rotation viowod from shaft ond is standard.

## FLUIDS PERMISSIBLE

When working pressure lower than 70 bar, hydraulic oil with a viscosity ranging from $\mathbf{3 0}-50 \mathrm{cSt}$ (ISO VG32). When working pressure higher than 71 bar .hydraulic oil with a viscosity ranging from 50-70 cSt(ISO VG68) at $40^{\circ} \mathrm{C}$ is recommended. (ISO VG32) at $40^{\circ} \mathrm{C}$ is recommended.

## DRAN PORT PIPING

Drain connection must be piped directly to tank and below the oil level with a back pressure not exceed 0.3 bar.

## OIL TEMPERATURE RANGE

Oil temperature range should be between $15-60^{\circ} \mathrm{C}$ for continuous operation and should be higher than $7^{\circ} \mathrm{C}$ at starting

## ALIGNMENT AND INSTALLATION OF PUMP

The shaft alignment for pump and electric motor shall be limited to 0.05 mm TIR. and 1 degree angular error.

## INLET PORT PRESSURE

Inlet port pressure should be - 0.3 bar to +0.3 bar.

## FLOW ADJUSTMENT

The flow will be reduced when the flow adjusting screw is turned clockwise and increased when anticlockwise.

## PRESSURE ADJUSTMENT

The pressure will be increased when the pressure adjusting screw is turned clockwise and reduced when anti-clockwise.

P-Q CHARACTERISTICS (EX-WORK SET ) Flow setting:The max. flow as catalogue shown. Pressure setting:The min . operating pressure range.

## SLIDE SCREW

The slide screw is non-adjustable and set at factory. Unauthorized persons cannot tamper with the desired setting.

## CAUTIONS FOR STARTING

Start up the pump undor No-Load condition and repeat to start and stop the motor several times to oxtract the air from inside of the pump and piping. Then keep a 10 minutes continuous running for a better deairing.

PEAK-PRESSURE
The peak pressure is 140 bar for code * 2 \& * 3, and 210 bar for A4 \& A5.

## Dimensions

## TPF-VL***-G00-11 Dimensions



TPF-VL***-GH-11 Dimensions


