

## GEAR PUMPS - CAVITY VS SUCTION SHOE STYLE SELECTION GUIDE

| PUMP ATTRIBUTE                  | <br>CAVITY<br>GD, GJ, GJR, GL, GM, GN | <br>SUCTION SHOE<br>GA, GAF, GB, GC | REMARKS  |
|---------------------------------|--|--|--|
| ▶ Flow vs Differential Pressure |  | ✓  | ▶ Pressure Loading in the Suction Shoe Pump creates the ability to maintain more consistent flow at high differential pressures.<br>▶ <b>SUCTION SHOE OFFERS BEST IN CLASS PERFORMANCE</b>   |
| ▶ Temperature Performance       |  | ✓  | ▶ Suction Shoes provide thermal expansion space for gears and shoes, thus increasing temperature operational range. Gears/shoes of similar materials perform optimally over a large temperature range.<br>▶ <b>SUCTION SHOE OFFERS BEST IN CLASS PERFORMANCE</b> |
| ▶ Flow Rate                     | ✓  | ✓  | ▶ Both pump styles are positive displacement pumps and generate similar flow rates for a given gear size and geometry.   |
| ▶ Chemical Compatibility        | ✓  | ✓  | ▶ Both pump styles are manufactured with materials that are chemically compatible with a wide range of fluids.   |
| ▶ Reversibility                 | ✓  |  | ▶ The Suction Shoe is not well suited for bi-directional flow.   |
| ▶ Dry Lift                      | ✓  |  | ▶ The Suction Shoe does not dry lift well due to lack of pressure loading.   |
| ▶ Wet Lift                      | ✓  | ✓  | ▶ Both pump styles can generate lift in a primed system.   |
| ▶ Torque Required               | ✓  |  | ▶ The high hydraulic efficiency of the Suction Shoe does require a small amount of additional torque over the Cavity style.  |