& PERFORMANCE CHARTS

PUMP CAPACITY, SUCTION LIFT AND FLUID VISCOSITY.

SUCTION LIFT



Pump capacity decreases when the suction lift increases. To find out how much the pump capacity can be reduced, use chart A.

Example:

80 gal/min theoretic delivery (water) and 12 feet suction lift

- 1. Locate the suction lift in meters along the bottom of chart A (12 feet).
- 2. Follow a vertical line up to the intersection with the curve on the chart.
- 3. Follow this point to the left and read the pump effective capacity (80%).

FLOW RATE = THEORETIC FLOW RATE X EFFECTIVE CAPACITY/100

Flow rate = $80 \text{ gal/min } \times 0.80 = 64 \text{ gal/min}$

FLUID VISCOSITY



Pump capacity decreases when the fluid viscosity increases. To find out how much the pump capacity can be reduced, use chart B.

Example:

80 gal/min theoretic delivery (water) and 6,000 mPas / cps fluid viscosity

- 1. Locate the fluid viscosity in mPas / cps along the bottom of chart B (6,000 mPas) .
- 2. Follow a vertical line up to the intersection with the curve on the chart.
- 3. Follow this point to the left and read the effective pumps capacity (60%).

FLOW RATE = THEORETIC FLOW RATE X EFFECTIVE CAPACITY/100 Flow rate = 80 gal/min x 0.6 = 48 gal/min

The suction lift flow reduction and the viscosity flow reduction accumulate. If you are pumping a fluid with 6,000 mPas viscosity, the installation has 12 feet suction lift and if the theoretic delivery (water) is 80 gal/min, the real delivery would be:

FLOW RATE = THEORETIC FLOW RATE X EFFECTIVE CAPACITY DUE TO SUCTION LIFT/100 x EFFECTIVE CAPACITY DUE TO FLUID VISCOSITY/100 Flow rate = 80 gal/min x 0.80 x 0.60 = 38.4 gal/min



High suction lift reduces pump delivery.



High fluid viscosity reduces pump delivery.



