Vector Pumps Selection Guidelines (4000 Series)

1. Collect application information

Fluid: _____

Discharge Press: _____ psig

Suction Condition:

Lift: _____ feet

or Vacuum: _____ inches of Hg

or Flooded: _____ feet of fluid above pump

or Pressurized: _____ psig

Flow or Flow Range: _____ gpm

Temperature (°F): Min: _____ Max: _____ Normal: _____

Solids?, describe: _____

Solid Size: _____

Solid Length: _____

Solids %: _____

Viscosity at Temp: _____

Vapor Pressure at Temp: _____

Specific Gravity: _____

Duty Cycle (hrs/day): _____

Motor Enclosure: _____

Hertz: 50_____ 60_____

Volts: _____

Phase: 1 _____ 3 _____

Motor eff: Std _____ High _____ Inverter Duty _____

Variable Frequency Drive: Yes _____ No _____

If yes, what environment will controller be mounted:

Inside another panel _____ Dry, fairly dust free _____

Dusty area _____ Wet area _____

Wash down area _____

Hazardous area _____ If yes, class and group _____

If Yes, input voltage: 120_____ 230_____ 460 _____

2. Determine the maximum roller speed

Duty Cycle (hours/day) of operation

- See pump performance graphs

Viscosity of the fluid

- < 200 cps: no speed correction needed
- 200 - 1000 cps: max. speed 40 rpm
- 1,000 - 5000 cps: max. speed 30 rpm; use flooded/pressurized suction
- 5,000-10,000 cps: max. speed 20 rpm; use flooded/pressurized suction
- 10,000-15,000 cps: max. speed 10 rpm; use flooded/pressurized suction

Note: With viscosities over 200 cps it is very important to oversize the suction line 1-1/2 to 2 times the pump connector size and to keep suction lines as short as possible.

Temperature of the fluid: If the fluid temperature pumped is within 15˚ F (9.4˚C) of the maximum temperature rating of the hose, contact factory and select a pump with a maximum speed of 20 rpm.

3. Pump Selection

- Select pump that can deliver the required flow based on the maximum roller speed and discharge pressure required by the application.

Note: It may be required to select a larger pump if solids are larger than the maximum size the pump can handle.

4. Hose Selection

- Hose selection based on chemical compatibility and temperature.

5. Connector Type and Material Selection

6. Drive Selection