

PUMP TYPES

- **Variable Speed or Rex-Roth-type pumps are preferred**
- **Use "Oversized" pumps**
 - ✓ Oversize pumps can operate at reduced speed (RPM).
 - ✓ FSI does not recommend running pumps at full speed. 1750rpm is adequate for FSI systems.
 - ✓ Slower speed (RPM) will generate less heat.
 - ✓ Slower speeds will cause less wear on internal components.
 - ✓ Larger housings are typical with larger pumps. Both assist with heat dissipation.
- **Do NOT use Magnetic Drives on the Polyol side of equipment**
 - ✓ Mag Drives add cost to purchase, parts and maintenance.
 - ✓ Mag Drives induce unnecessary heat.
 - ✓ Polyols and most Polyol blends are self-lubricating; hence, a Mag drive on Polyol side is unnecessary

TEMPERATURE

- **Avoid High & Unnecessary Temperatures**
- **Use "Oversized" pumps**
 - ✓ Pump housing and polyol blend temperature is critical; this should be monitored and known.
 - ✓ Recirculation to the back of pump can assist in heat reduction, and is preferred.
 - ✓ Chemical temperatures and pump temperatures are different. Both need to be known.
 - ✓ All Polyols and Polyol blends are subject to degradation in high temperatures.
 - ✓ Typically, surfactants are the first to break down in high temperatures. This can lead to abrasion and erosion of equipment internals.
 - ✓ Excess heat can occur in "recirculation mode".

OTHER

- **Use Carbide tips or hardened orifices**
- **Use Stainless Steel Flow Meters**

UNNECESSARY ITEMS

- **Epoxy-Coated Tanks**
- **Chrome & Protective Coatings**

NOTE: Recommendations are what FSI knows to be true and accurate.