Items to CONSIDER before purchasing a urethane casting machine

Day tanks vs. Continuous Slinger Degasser

◇ Day Tanks DO require a stop in production when refilling. N2 pressure must be relieved in order to vacuum fill or gravity fill the tanks. To heat and degass the newly filled material can take an hour or more depending on tank size.
◇ Slinger Degassers refill directly from a supply drum and quickly heat and degass the material with no interruption in a pour. Continuous pours of thousands of pounds are easily achieved. Drum temperature is significantly lower than the Degasser operating temperature. There is NO possibility of NCO loss or heat degradation.
◇ Material in a day tank is always at operating temperature whether recirculating or not. This will cause heat degredation and NCO loss.

Advantages of TPS Direct Electric Heating

◇ TIME: typically 30-40 minutes to heat up all material and machine components from a cold start.
◇ EFFICIENCY: less energy is required for initial heating and temperature maintenance as compared to "hot box" systems or heat tracing with glycol or oil.
◇ CONTROL: Each component has its own PID controller and RTD sensor. (Example: Slinger Degasser has three temperature sensors and controllers. Material flows to a heated transfer line, pump, Mixer Delta-P Valve then the Mixer. All of these have their own sensor and controller. Because of this accuracy is ± 1°C.
◇ LONGEVITY: Due to low wattage per heater area, typical life spans for tanks are 20+ years.
◇ EASE OF MAINTENANCE: There are no separate liquid heat pumps, extra lines to leak, solenoids, radiant heaters or blowers. With difficult hot melt materials such as MOCA this is extremely convenient.

Individual Color Systems vs. Shared

◇ Purging a shared color tank lines and injector wastes a large quantity or color and or solvent. Change over times can take 30 to 40 minutes.
◇ All TPS Colors utilize individual tanks and mixer injectors. Change time from one color to the next is 10-15 seconds.
◇ Up to six individual colors can be supplied on a typical MKXX system.
◇ Only a pump selection and mixer chamber purge is necessary to change over.

Mixhead maintenance

◇ TPS mix heads are some of the simplest yet robust available today. They can operate from several weeks to several months depending on conditions before breakdown.
◇ A standard mix head can process from a few pounds per minute to 25 with no adjustments (depending on viscosities).
◇ By removing the chamber nozzle and one Delta-P valve it is possible to inspect the cleanliness of the mixer in a few minutes.
◇ The time to remove the complete mix head for cleaning in a urethane solvent is under 10 minutes.

Non-Recirculating Systems vs. Recirculating

◇ TPS mix heads are not required to run in between small pours. Once the mix head is full of reacted material (50cc), pouring can start and stop without ratio deviation as long as pot life is not exceeded.
◇ Recirculating machines have double the lines, valves and complexity of non-recirculating systems. This can make for more troublesome maintenance.
◇ TPS non-recirculating systems can start from complete cold to 120°C in 40-50 minutes. This allows for complete melt out of MOCA if used and eliminates the need for "overnight" timers and wasted energy.
◇ Most recirculating systems use the movement of material to compensate for "cold spots" in the material streams (pipe fittings, valves etc.). With TPS Direct Electric Heating there are no cold spots, which can be difficult to troubleshoot especially with hot melt materials. Waiting for troublesome areas to eventually melt out can take hours.
◇ CLEAN SIMPLE DESIGN: Eliminates congestion in mixer area, pumps and tanks.
◇ A standard TPS MKXX can run MDI or TDI systems with no modifications. As well as Esters, Ethers and Quasi chemical systems.
◇ There is no need to adjust backpressure on recirculation streams, which varies with temperature, viscosity and pour speed from pour to pour.

Service

◇ All TPS equipment is warranted for 6 months to 1 year depending on the particular component.
◇ TPS is located in New Jersey, USA and stocks thousands of spare parts for next day delivery if required.
◇ All equipment gets FREE LIFETIME technical support by phone or email.