



WATER REQUIREMENTS

INTENSIFIER

The water supplied to the intensifier is a crucial factor in waterjet cutting because of its direct influence on the service life of equipment components such as check valves, seals, and the orifices that shape the water stream. A high concentration of Total Dissolved Solids (TDS) causes accelerated wear of these components.

As part of pre installation planning, a water quality analysis should be performed by a commercial company that specializes in water conditioning equipment. Water quality available for the installation is unique for each application and geographic location. Consult a water purification supplier to determine the most suitable equipment for specific local conditions. The minimum information that should be furnished is: TDS, Silica content and pH value.

Inlet water should be pretreated for either the removal of hardness or reduction in total dissolved solids. Water softening is an ion exchange process that removes scale forming minerals such as calcium. TDS reduction can be accomplished with either deionizing (DI) or reverse osmosis (RO) equipment. DI or RO will usually provide better component life than water softening processes. The best pretreatment process for a specific application is based on the original water quality and the desired service life of affected components. Water treatment resulting in TDS content of less than 0.5 ppm is not recommended.

WATER TREATMENT GUIDELINES

		Recommended Treatment
Total Dissolved Solids TDS	Low TDS (<100 ppm)	Considered good water quality. Can be treated by softening.
	Moderate TDS (<100-200 ppm)	Can be treated by softening or TDS reduction (RO or DI).
	High TDS (<200 ppm)	Considered poor water quality. Should be treated with RO or DI.
Silica Content	High Content (> 15 ppm)	Dual Strong Base DI.
pH Value	Treated water must have a value of 6 to 8.	

HEAT EXCHANGER

The heat exchanger uses regular tap water to cool the hydraulic fluid. The hydraulic fluid temperature must be maintained below 120° F (49° C). A constant water flow of 3–12 gpm (11–45 lpm), depending on the pump model, is required at an inlet temperature not to exceed 70° F (21° C). Public water is usually acceptable for cooling purposes. The ambient temperature can also be a factor in cooling. Additional cooling might be required if the pump is confined in a small, high temperature space.



Specifications subject to change.

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