

CLOSED LOOP HEAT EXCHANGER

Water to Air Laboratory Chiller

Model VJB2002 is a refrigerated, re-circulating water conditioning heat exchanger specifically configured for operation with Extended Interaction Klystrons (EIKs). This easy to use chiller is optimized for the demanding purity and cooling requirements of water cooled EIKs. It features a robust refrigeration system designed for continuous operation, providing accurate control of temperature and ensuring water purity needs are met.

With a focus on reduced maintenance, the chiller comes with a level indicator and built-in funnel to make filling easier. The integrated air filter is located behind an easy to remove condenser grill for quick and simple cleaning to optimize chiller performance and maximize operational life.

When purchased as part of a system, the chiller comes pre-configured to match the EIK cooling needs and interlocked with the power supply unit to ensure safe operation of the EIK. Fault conditions of out-of-range temperature, flow or conductivity will provide an open circuit signal to the power supply that will shut down the operation of the EIK for fault resolution.



Model VJB2002

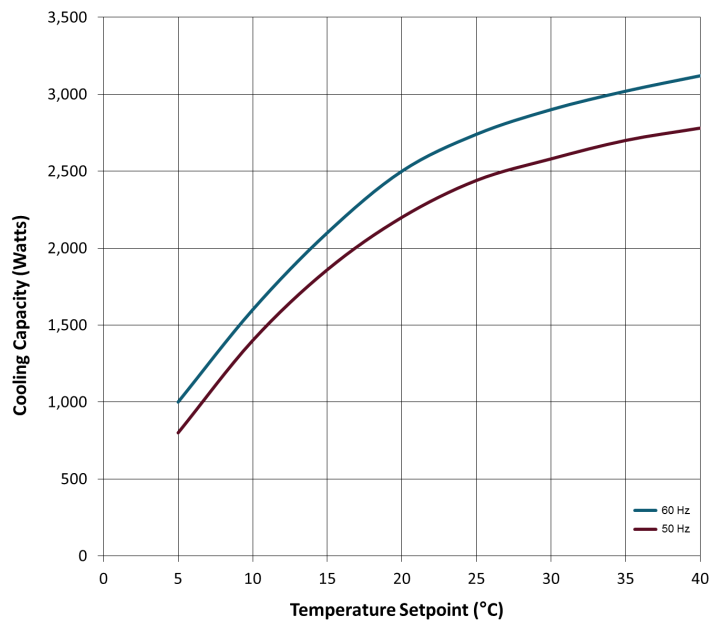
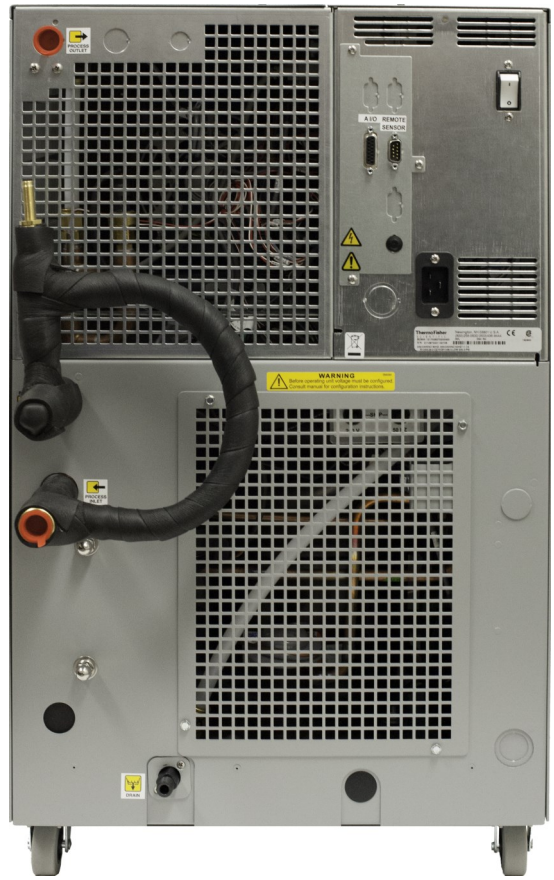
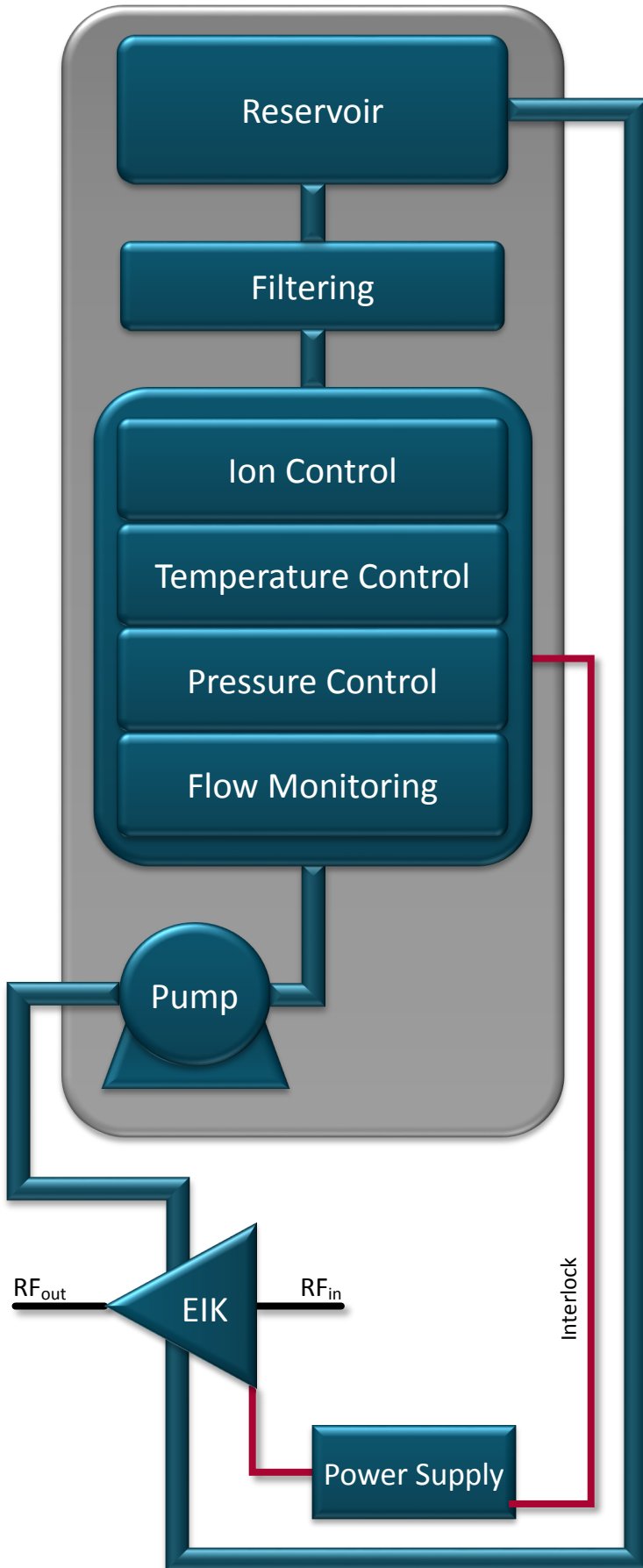
Functions:

- A pump in the chiller circulates water throughout a closed-loop system. Heat from various sources is conducted into the water and a heat exchanger in the chiller transfers the heat into the surrounding air
- A partial flow filtering system maintains water purity by removing particulates and regulating the conductivity (resistivity) of the water
- The chiller displays process water temperature, pressure, flow rate and resistivity. Additionally, these parameters are monitored to warning and trip level ranges
- An EIK power supply interlock function enables EIK high voltage operation when cooling system parameters are within correct operating values

Water cooled EIKs operate at high power densities. Careful attention to adequate water flow and purity is required to ensure proper operation and long life. Water with contaminant levels that exceed the purity requirements can result in severe corrosion and scaling, which includes normal municipal tap water. Unchecked corrosion of the metals in the EIK coolant passages will result in leaks and reduced operating life. Scaling obstructs cooling passages, preventing efficient heat transfer. Overheating and permanent damage may be the result. Continuous filtering and ion regulation is necessary for maintaining high water purity. For further details see CPI Bulletin #MMAP004. These issues are addressed in the CPI model VJB2002 refrigerated re-circulating heat exchanger.

Features	
Coolant Temperature	+5 °C to +40 °C
Temperature Stability	±0.1 °C
Cooling Capacity	2.2 kW @ 20 °C
Coolant Flow	6.4 l/min @ 415 kPa
Temperature Operating	+10 to +40 °C
Reservoir Volume	7.2 l
Power	200 to 230 VAC 50/60 Hz, 10 A
Dimensions (LxWxH mm)	673x435x735
Mass	80 kg

The values listed represent typical performance. Formal controlled specifications for use in equipment design may be obtained from CPI



Options

Voltage	100 to 115 VAC, 50/60 Hz
High volume pump	15 l/min @ 415 kPa