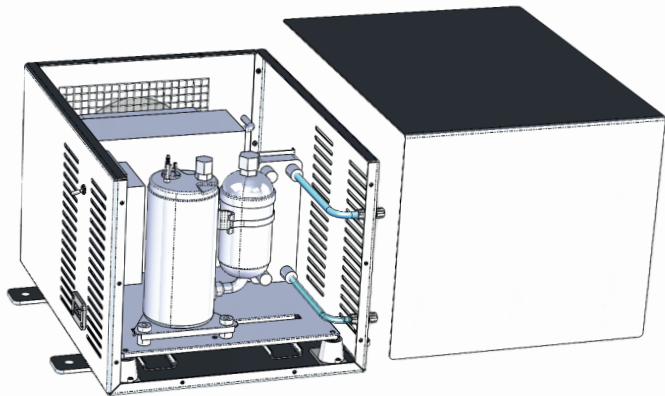


DEF Fluid Cooling System for US Custom Chassis Fire Apparatus

The Kraken Power DEF Fluid Cooling System is a purpose-built solution for the US custom chassis fire apparatus, engineered to maintain optimal DEF fluid temperatures and ensure compliance with 2027 EPA emission regulations. Fire trucks face unique operational challenges—short-distance runs, extended idle times, and low airflow— that cause DEF temperatures to rise beyond safe levels, leading to SCR (Selective Catalytic Reduction) inefficiencies, engine fault codes, and potential derates.



Key Features & Benefits

- ✓ **Active Temperature Control** - Automatically switches between heating and cooling modes based on DEF temperatures, ensuring it stays below **30°C (86°F)**.
- ✓ **Integrated with Engine Cool System** - Taps into the **aftertreatment heating loop**, eliminating the need for seprate cooling circuits.
- ✓ **Power Source Flexibility** - Operates from:
 - **The 2027 Cummins X15 48V alternator**, which also powers the aftertreatment system’s electric heat.
 - **Kraken Power’s intergrated onboard power systems** for standalone operation.
- ✓ **Smart Control Integration** - **J1939 CAN-interface** allows integration with:
 - The chassis’ **native CAN system** for seamless operation.
 - The **PRO//connect xfOS control panel** for user-defined On/Off/Auto modes and real-time DEF temperature display.
- ✓ **Ruggedized Stainless Steel Enclosure** - Insulated housing minimizes thermal fluctuations and improves system efficiency.
- ✓ **Works Alongside Existing Heating Elements** - Prevents freezing in cold weather while ensuring compliance in hot environments

Technical Specifications

Description	48VDC Liquid Chiller
Nominal Voltage	48 VDC
Current	15A
Power	720 W
Weight	33 lbs / 12 kg
Dimensions	450 x 350 x 300 mm 17.72 x 13.77 x 11.8 in
Cooling Capacity	1200 W / 4,080 BTU
Moto Type	Brushless DC Motor
Speed Ratings	2500 - 4500 rpm