



PRESS RELEASE

Kenway perfects hydraulically powered HVAC system

Redesigned flameless heating/cooling concept keeps cabs comfortable on any job, in any climate

FAIRMONT, Minn. – September 23, 2014 – Kenway Engineering Inc. of Fairmont, Minnesota, has introduced a flameless HVAC unit for off-road construction equipment unlike any previous hydraulics-based operator cab climate control systems. The Kenway 9067 Series is the product of four years in-the-field use, both as OEM and retrofit equipment.

The Kenway 9067 Series is a completely re-engineered and redesigned operating system that offers more power, greater reliability and a lower cost of operation than the industry has ever seen before from a flameless HVAC unit.

Ideal for off-road construction equipment at jobsites that restrict or prohibit heaters running on propane or diesel fuel, the Kenway 9067 Series can be installed as a split unit system or as a self-contained model about the size of a small window air-conditioner. As a self-contained unit, Kenway 9067 Series installation requires a rectangular opening in the cab wall, four hose connections and a single electrical hookup.

Flameless means hydraulic

Kenneth Detloff, co-owner of Kenway Engineering, said, “People in this industry have been looking for a better solution than what’s been available. More jobsites are requiring flameless solutions, and flameless means hydraulic. We have the solution. It’s available right now.”

Detloff said that in addition to its reliable performance, the Kenway HVAC unit also offers low cost of ownership. “Our system does not require tanks of propane or diesel fuel and there is no hydraulic oil reservoir or filter in our system to maintain, which eliminates those regularly scheduled service steps.”

Rey Carlson, Kenway’s chief engineer, said the Kenway heat system has carefully designed hydraulic circuits that protect the pump, valves, and seals from damage caused by oil breakdown and pressure and flow fluctuations. “The hydraulic power we use is only used to heat the cab, so our system has no thermal impact on the crane’s oil reservoir.”

Since the Kenway 9067 Series does not rely on engine heat to run an antifreeze/coolant-based HVAC system, the unit works just as well with cooler-running EPA Tier 4 engines as it does with pre-compliance engines.

Detloff said, “One customer told me his Tier 4 engines were only putting out about 100 degrees (Fahrenheit) at the engine, and only 66 degrees at the heater fitting. You’ll never heat a crane cab in northern Canada with those coolant temperatures. On the other hand, our hydraulic units can output 27,000 BTU per hour at idle. The hydraulic oil in our heat circuit can go as high as 205 degrees. Canadian crane operators in the dead of winter actually turn our heater down.”

Adaptable, efficient, smart

The system is highly adaptable for a wide variety of heavy equipment. Kenway Engineering can design units to suit any OEM interior cab scheme, and the compact size of the hydraulic drive unit can fit just about anywhere.

Carlson designed the system and its key components. Addressing crane cabs specifically, Carlson said: “All other crane HVAC systems suffer from thermodynamic inefficiencies. The compressor might be hidden deep in the engine compartment, while the evaporator and heater core are in the cab. The distance requires multiple hoses and connections, and a hydraulic swivel to transfer the engine coolant and refrigerant from the chassis to the cab. The result is pressure and flow losses and temperature changes.”

In addition to thermodynamic inefficiencies, other HVAC systems present another complication. Carlson said, “These fluids are not compatible with the hydraulic swivels so they need to be specially designed to handle them. Service and maintenance is harder and more expensive with these systems. Every additional connection and swivel seal represents a potential leak point and a service and repair item.”

The design of the new system eliminates these concerns, Carlson said. “Self-contained or split system, everything is right there.”

The Kenway 9067 Series system is a 6th generation design, Carlson said. “It is by far the smartest. We have installed it in ‘series’ with other machine functions – for instance, the swing function – so it has to share the machine’s hydraulic resources. The system also uses sensors, a Programmable Logic Controller (PLC) and in-house developed programs. But the machine operator hardly notices our system running at all.”

The unit can be configured to any customer’s unique requirements, Carlson said. “Since each application has its own challenges and requirements, a PLC may not be necessary. Or we can add automatic temperature control (ATC) and controller input/output diagnostics. We work with each customer to come up with the best solution to meet that customer’s specific needs and to keep the end user happy.”

Ideal as OEM

Kenway Engineering is a vertically integrated, high tech manufacturing facility. All parts and components are made on site, from hydraulic hoses to laser-cut frame and housing components. Detloff said, “Fabricating and assembling so much of our product in house allows us to be reactive to the

customers' changing needs and maintain an average on-time delivery record better than 95 percent. This helps to keep our customers' assembly lines up and running.”

Kenway's own engineering department will work with any manufacturer to create an OEM design perfectly matched to its branded interior cab scheme, from custom painting in Kenway's state-of-the-art finishing center down to the selection of matching control panel switch orientation, style, labeling and icons.

Kenway Engineering custom designs and engineers OEM and aftermarket mobile air conditioning and heating systems for off-road construction, drilling, mining and agriculture heavy equipment. Operations at Kenway Engineering's vertically integrated high-tech manufacturing facility are ISO9001 certified and lean oriented, ensuring rapid customer response and on-time delivery. For more information about how Kenway Engineering's product development and manufacturing team can develop high-quality solutions that integrate seamlessly in your equipment and manufacturing processes, call (507) 238-9051 or visit the company website at <http://kenwayengineering.com/>.

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Photos: See email attachment(s)

Caption: The three control switch styles shown above this Kenway 9067 Series flameless HVAC unit demonstrate how the OEM component supplier perfectly matches a manufacturer's interior design scheme even at the operator's control panel.

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