

The background of the entire page is a high-contrast, industrial scene. A large, glowing orange sphere, resembling a sun or a molten planet, dominates the upper half of the frame. In the foreground, several workers are silhouetted against the bright light. One worker in the center is holding up a device, possibly a camera or a sensor. To the left, another worker stands looking towards the center. The overall atmosphere is one of intense heat and industrial activity.

# **POLAR VORTEX™**

*by DieselMisers*

## **SEVERE-DUTY AIR CONDITIONER**



## OUR MISSION:

Reliably cool the operator's cab of industrial equipment, even in the most harsh and demanding environments

## CHALLENGES:

- high vibration
- high ambient temperature
- un-insulated space
- continuous use
- open window operation
- dusty environment
- atypical power source
- \$ cost constraints

## THE SOLUTION:



The Polar Vortex is a rugged, highly specialized operator's cab air conditioning system that's built to withstand the demands of round-the-clock use in harsh industrial settings, such as steel mills. The Polar Vortex makes use of components adapted from the heavy-duty trucking industry - every part of the air conditioner has been proven to hold up for millions of miles of on-road use. Polar Vortex was originally developed and proven through 4 years of testing on overhead cranes in some of America's largest steel mills.

## POLAR VORTEX SYSTEM COMPONENTS:



The compressor and motor box assembly mounts anywhere inside or outside the cab. The ruggedized components are protected in a 16" x 16" x 10" aluminum housing.



The condenser assembly mounts on the exterior of the cab, either to an exterior wall or roof, and opens easily for regular cleaning. The assembly measures 20" x 20" x 7".



The twin evaporator fan assemblies mount anywhere in the cab, typically aimed downward at the equipment operator. Each unit measures approximately 9" x 8" x 8".



The Power Converter Panel mounts inside the cab. This 20" x 16" x 7" enclosed and filtered steel case converts the cranes "dirty" electrical source (either AC or 250VDC) to "clean" 24VDC and 240VAC for use by air conditioning components.





## **POLAR VORTEX DESIGN SPECIFICATIONS:**

- approx 15000 BTU's cooling capacity
- continuous use capability (24/7/365)
- operates in high humidity (>90%), high dust environment
- ambient temperatures up to 130° F
- no components heavier than 75 lbs.
- operates using atypical power sources, incl. 250VDC
- able to withstand electrical “ripples” and surges (up to 1000 volts)
- unaffected by high vibration/rapid starts and stops



For more information, contact DieselMisers, Inc.  
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