

# Charging Forward with Innovation...



AC-APU Model

## AC-APU

#### **The AC-APU readies** locomotives for immediate startup and deployment.

The PowerHouse<sup>™</sup> is a revolutionary idle reduction technology that significantly decreases the energy wasted through idling. It immediately delivers the benefits of increased fuel savings and reduced noise and air pollution.

- » Heats and circulates water or coolant through the locomotive engine block and cooling system to maintain a temperature of above 100°F, even in the coldest of temperatures.
- » Heat is provided by a diesel-fired heater, rather than using electrical elements, requiring significantly less maintenance.
- » PowerHouse<sup>™</sup> units consume significantly less fuel than the idling locomotive engine, leading to lower costs and increased fuel savings for a rapid return on your investment.
- » Tier 4 compliant Kubota<sup>®</sup> engine helps railroads comply with U.S. and global emission standards.
- » Consumes, on average, 0.38 gallons of fuel per hour.
- » Operates in the harshest of conditions with proven dependability.



Fuel Savings



- Flow rate of 7.58 CFM @ 125 psi
- 3 HP, 230 VAC 3 Phase TEFC Motor
- 3 HP VFD
- Maximum Pressure of 140 psi

**Generator Module** 

**Diesel Engine** 

Generator

Controller

• 22 HP Kubota® D902 3 Cylinder

• Engine Display with Automatic

Start/Stop & Engine Protection

• Nominal Speed of 1800 RPM

Mecc-Alte 8.4 kVA 4 Pole, 120/240 VAC Single Phase







#### **Heater Module**

 A 20 GPM 74 VDC Electric Water Pump Circulates Heated Water and/or Coolant





While the APU is in generator mode, two NEMA 5-15 and 1 NEMA L14-20 outlets on the bottom of the control panel are enabled. While in generator mode, the APU does not monitor the locomotive. System can also include optional 5 GPM oil circulating pump



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**Starter Motor Longevity** 

## **Reduced Engine Wear**



- » Charges Locomotive Batteries
- » Charges On-Board Air System
- » Highly Fuel Efficient 26kW Heater Module
- » 22 Horsepower, 3 Cylinder Kubota<sup>®</sup> Engine
- » Two Operating Modes: Idle Reduction & Generator; APU can be used as an **Auxiliary Generator**
- » Optional Lubricant **Oil Heat**
- » Compatible with AESS

# Remote monitoring provides real-time data.

The PowerHouse<sup>™</sup> APU includes standard remote monitoring. With this feature, you can access real-time operating data that shows how your system is performing through the PowerHouse<sup>™</sup> Dashboard displayed on your computer, tablet, or smart phone.

Key features include:

- » Accessible anytime anywhere.
- » Real-time maintenance updates and more.
- » Visible fuel savings.



#### **Environmentally sound.**

Integral to the design of the PowerHouse<sup>™</sup> are the environmental benefits the units provide:

- » Reduction in noise and air pollution.
- » USEPA SmartWay\* verified technology that helps railroads meet USEPA mandates.
- » Proactive compliance with Tier 4 EPA clean air standards.
- » 90% emission reduction.

\* SmartWay is a public/private collaboration between the United States Environmental Protection Agency (USEPA) and the freight transportation industry that helps shippers, carriers, and logistics companies improve fuel efficiency and save money.

#### NYSERDA proves that the PowerHouse™saves thousands of gallons of fuel.<sup>†</sup>

The New York State Energy Research and Development Authority (NYSERDA) conducted a demonstration project on locomotives equipped with the PowerHouse<sup>™</sup> idle reduction technology. Over the demonstration period, numerous trains were tested for the amount of fuel used by the PowerHouse<sup>™</sup> units during locomotive out-of-service time, compared to the amount of fuel consumed by idling locomotive engines during the same amount of time. The net fuel savings experienced by every train tested numbered in the thousands of gallons.

† PON 2078.

