



WATLOW®

Powered by Possibility

ECO-HEAT®



New Technology Development To Elevate Your System

how Watlow's new technology
enhances the performance of
diesel emissions systems



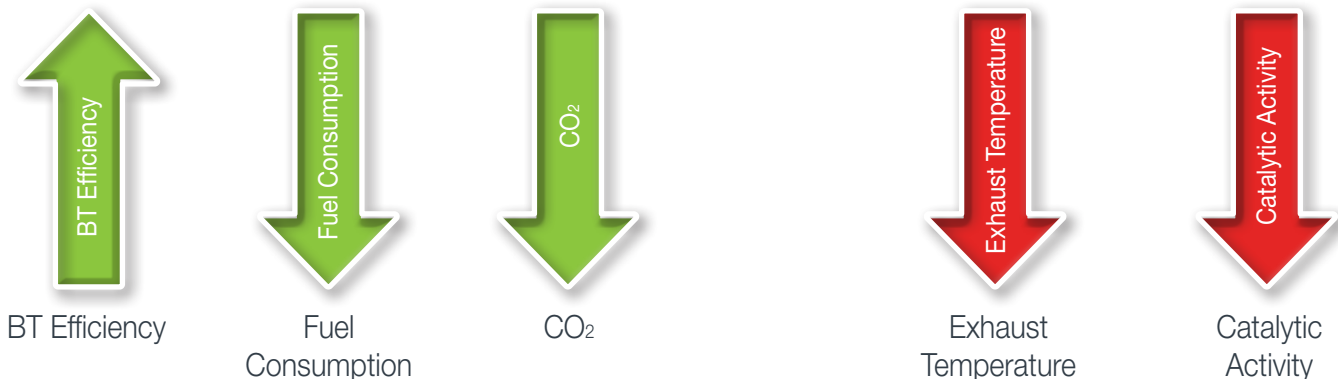
The Problem

Improve Diesel Engine Efficiency while Meeting Tighter Emission Limits

Recent technical studies indicate that current engine-based exhaust heating measures will not be sufficient to meet new emissions legislations. Additional thermal energy is needed quickly for improved NO_x control during cold starts and also for “keep warm” strategies to meet Real Driving Emissions (RDE) and new Low Load test cycle requirements.

The new emissions challenge

- Strong focus on CO₂ reduction and increased fuel economy
 - Greater need to reduce NO_x emissions
 - RDE in Europe
 - Ultra-Low NO_x (CARB)
 - Euro VII
- 
- Corresponding loss of exhaust gas temperature due to greater engine efficiency
 - Leads to lower catalytic activity which hinders NO_x reduction





The Solution

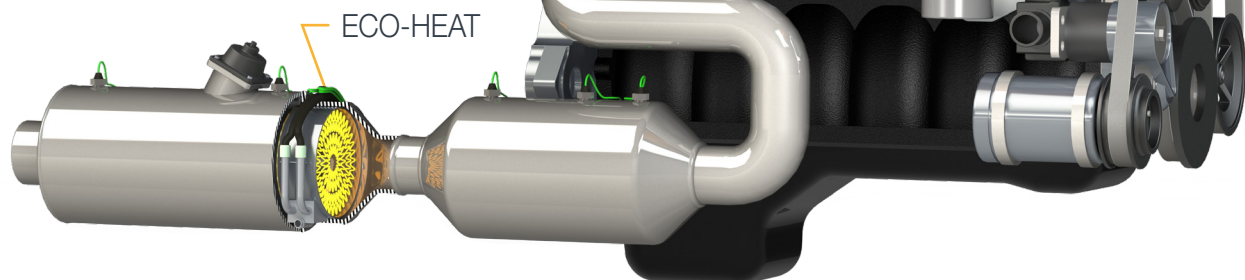
What is ECO-HEAT®?

ECO-HEAT® Exhaust Heating System – is a thermal solution that provides supplemental heating of the aftertreatment system using electricity from your alternator to operate when exhaust gas temperatures are too low. A smart power switch utilizes J1939 CANbus communications to control the heater seamlessly based on parameters communicated by the engine ECU.

- Exhaust heating system consisting of **ATS™** enabled:
 - Electrical heater
 - Smart power switch/control
- Rapidly and independently heats the aftertreatment system allowing the engine to operate more efficiently while meeting low NOx emission requirements
- Simpler, less expensive and more fuel efficient than alternative engine-based heating methods



Smart Power Switch
(mounts to truck frame)



*Watlow's Adaptive Thermal Systems™ (ATS™) are a suite of technologies integrating heater designs with smart controlling systems that deliver high performance, closed loop thermal solutions.



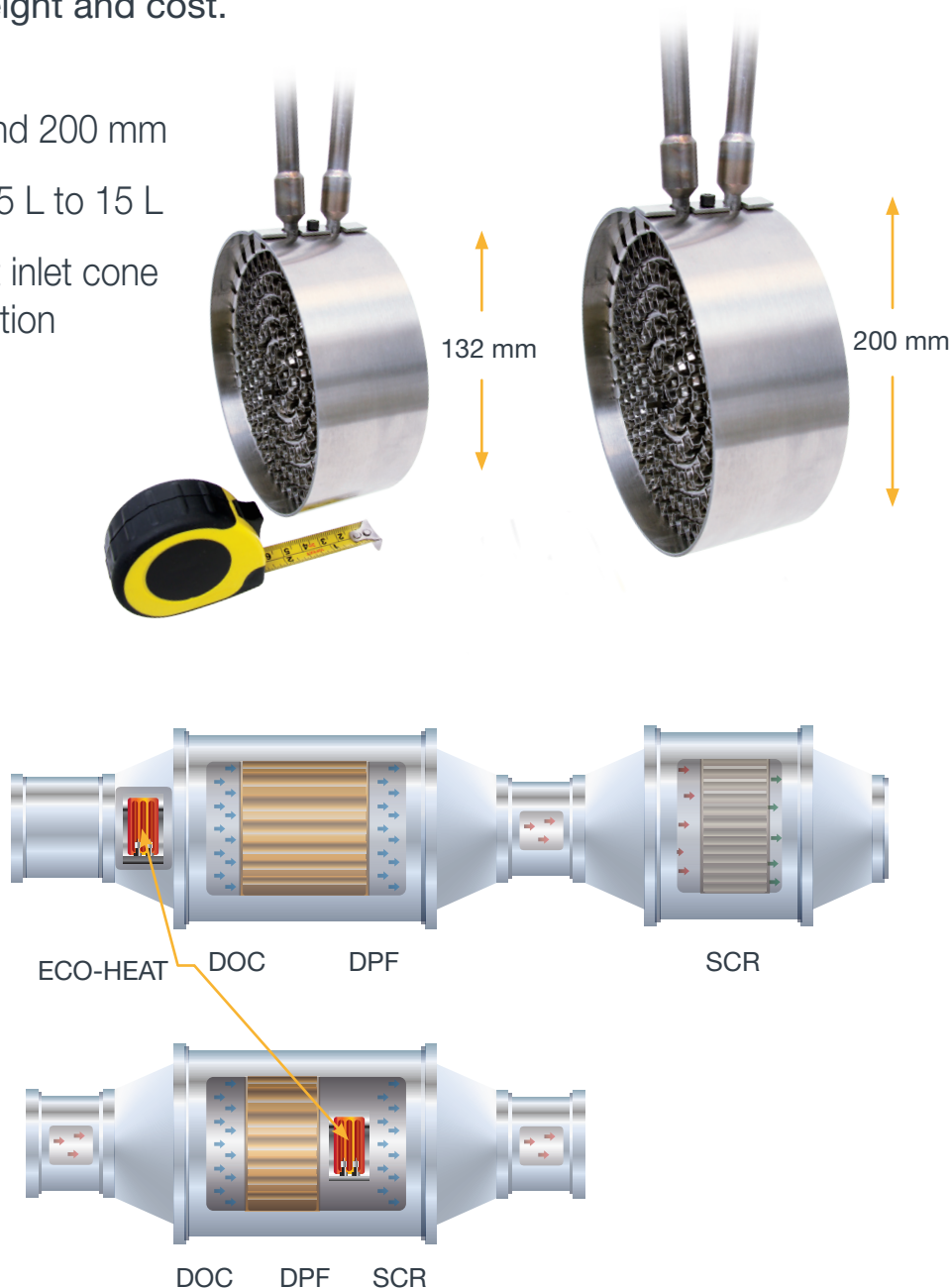
The ECO-HEAT Development

ECO-HEAT Electric Heater Features

The system is designed for placement inside the aftertreatment cans or inlet cones to optimize space claim, weight and cost.

- Two diameters—132 mm and 200 mm
- For engines ranging from 4.5 L to 15 L
- Placed inside aftertreatment inlet cone or inside can in desired location
- 24VDC or 48VDC

Heater Voltage	Maximum Heating Power
24VDC	6-7kW
24VDC	12-14kW



Prototypes are available now for engine test and evaluation.

For more information visit watlow.com/diesel