

DIESEL FIRED COOLANT HEATERS

Coolant heaters work independently of the engine and thus offer a double plus: **pre-heating the vehicle's passenger compartment and the engine.**

The heaters are integrated in the cooling system of the engine. The thermal energy gained is then distributed through the vehicle's own heat exchanger as forced hot air and this heats the interior of the vehicle via existing air vents. The engine is warmed up with the residual heat in the cooling water.

Practical controls - such as a digital timer or key fobs - make for ideal and pre-heated engines and compartment space.

How an Espar HYDRONIC Coolant Heater works
As soon as the heater receives its starting pulse, the following processes are triggered by the central control unit:

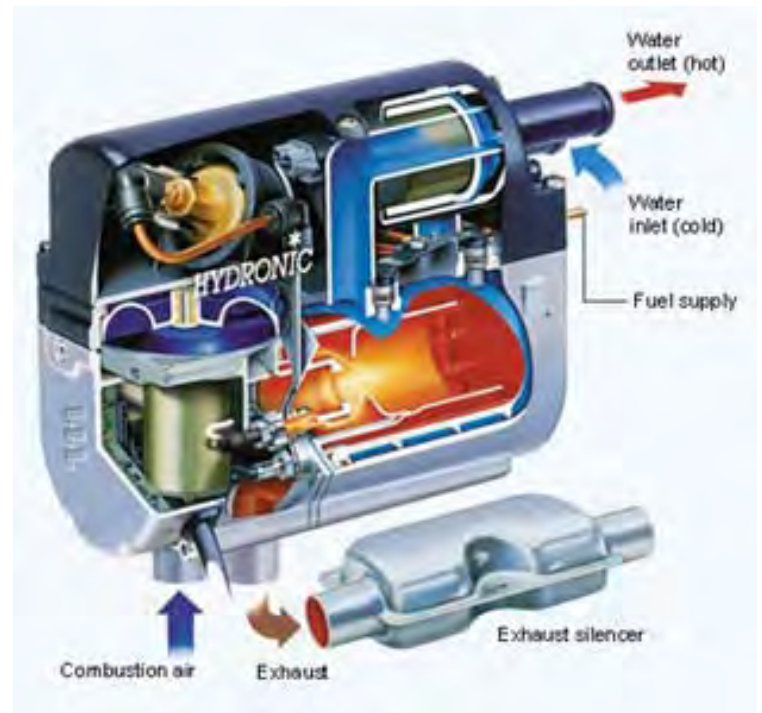
- Automatic safety check.
- The glow plug is warmed up.
- The metering pump conveys fuel.
- The burner motor starts smoothly.
- The fan delivers combustion air.
- Fuel-air mixture ignites (flame formation).
- The hot combustion gases flow through the heat exchanger that delivers the heat to the coolant system of the vehicle's engine.

The heater is controlled electronically and works - according to heat requirement - in several power stages.

This compact coolant heater offers an affordable heating solution to many applications.
Ideal for preheating the engines of

- medium & heavy duty trucks
- construction vehicles
- off-road equipment
- boats
- cars

It features automatic heat regulation while being fuel and power efficient.



Since the heater runs on fuel and 12 or 24 volt power, it is able to perform this completely independently of the vehicle engine. The unit regulates the coolant temperature between a low of 65°C (149°F) and a high of 80°C (176°F) by automatically cycling the heater between heat levels.

Operated from the vehicle cab by:

1. an on/off switch
2. a pre-select timer
3. a combination of both.

Safety Features include:

1. A flame sensor.
2. Temperature regulating sensor.
3. Overheat sensor.

Which makes the Hydronic D4/D5 a safe and dependable heating system.

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1-800-667-6879 230 - 29th Street East, Saskatoon, SK S7L 6Y6



DIESEL FIRED COOLANT HEATERS

Specifications	Hydronic 4	Hydronic 5	
Heat output (±10%)	4.3 kW (14,781 BTU/hr) - High 2.4 kW (8,188 BTU/hr) - Low	5 kW (17,000 BTU/hr) - High 2.4 kW (8,200 BTU/hr) - Low	
Current draw (±10%)	4.0 amps High 1.91 amps Low	12 volt 4.16 amps High 1.91 amps Low	24 volt 2.08 amps High 0.95 amps Low
Fuel consumption (±10%)	0.53 l/hr (0.13 US gal/hr) High 0.27 l/hr (0.07 US gal/hr) Low	0.62 l/hr (0.16 US gal/hr) High 0.27 l/hr (0.08 US gal/hr) Low	
Operating Voltage Range			
Minimum Voltage	10.2 V	10.2 V	20.4 V
Maximum Voltage	16 V	16 V	32.0 V
Working pressure	2.5 bar (36 psi)	2.5 bar (36 psi)	
Ambient operating temperature	-40°C to +80°C (-40° F to 176°F)	-40°C to +80°C (-40° F to 176°F)	
Weight	2.7 kg. (5.94 lbs.)	2.9kg. (6.4lbs)	
Controls available	On/Off switch or 7-day timer (Multi-Function Timer)	On/Off switch or 7-day timer (Multi-Function Timer)	

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COLD WEATHER DIESEL FUEL ENHANCERS



Made In Canada
for Canadian weather conditions.



SUPER CONCENTRATE

Emergency Anti-Gelling Additive
for Gelled Fuel

Diesel Melt® is an emergency fast acting anti-gelling treatment additive that is recommended for fuel that has already gelled.

SUPER CONCENTRATE

Canada's #1 Anti-Gel Fuel
Enhancer

A comprehensive multi-purpose fuel enhancer with anti-gel that addresses eight critical fuel performance issues to reduce fuel consumption and extend fuel system, engine and diesel particulate filter life.

Cleans and unplugs fuel system. Prevents costly fuel pump and injector repairs.

All the Benefits of 4+ Premium® plus Anti-Gel.

SUPER CONCENTRATE

Cold Weather Preventative Diesel
Fuel Anti-Gel Additive

Use Summer Fuel in the Winter & Save!!

Recommended for use prior to winter storage of machinery, to prevent spring start-up problems.

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The parties agree that the implied warranties that are set out in the Sale of Goods Act, are excluded and shall not apply to goods sold or services supplied. The parties also agree that only the warranty expressly provided by DSG Canada or Saskatoon Diesel Services Ltd. shall apply to the goods sold or services provided. The purchaser or his agent by entering into this transaction acknowledges that he/she has read this agreement and warranty disclaimers herein and also acknowledges that this agreement comprised the entire agreement between the parties and that there are no antecedent or extrinsic representation or collateral agreements that terms are strictly net 30 days. Warranty is set out in the terms and conditions of sale above. Warranty is limited to the original purchaser. 1-800-667-6879. If you encounter any trouble call this number. Failure to do so will null and void all warranties.

FAST IDLE KITS

DSG's unique fast idle kit allows you to select a range of idle speeds that you can use to keep the engine warm in cold weather, or for other applications. Complete with easy to use instructions.

The Dodge Cummins is notorious for not sustaining engine temperature while idling in cold weather, causing shortened engine life. DSG's electronic variable speed fast idle kit prolongs engine life, promotes faster warm ups and provides more comfortable in cab temperatures in cold weather.

Our Fast Idle Kit also aids in cooling down the engine during hot weather and improves air conditioning performance. Operation is simple; push the activation button and idle speed increases to 1200 rpm, adjust the speed up and down if desired with the adjustment dial, tap the brake pedal to return to base idle.

Soft start design builds speed up slowly to set point, as engine warms up and is also remote start friendly. Our kit comes complete with all the necessary mounting hardware and comprehensive instructions. Installation is under 2 hours with normal hand tools.



*NOTE-ON 2003-2004 MODELS THE TPS (THROTTLE POSITION SENSOR) COULD BE LOCATED ON THE LEFT SIDE OF THE ENGINE OR UNDER THE LEFT BATTERY. YOU WILL NEED TO KNOW WHICH YOU HAVE BEFORE YOU ORDER.

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PRIME OR STAND-BY POWER GENERATION



Stable Electrical Power When You Need it Most

Electricity, Power, whatever you want to call it, we depend on it, whether in our homes, work or when we are relaxing at recreational facilities.

Weather is unpredictable and power outages are more and more frequent, even in regions that were once known for very stable utility electrical supply. Just think about it – no one can control what Mother Nature may decide to throw at us!

At DSG, we are equipped to help you with standby emergency power or continuous power for applications like mining and construction sites. Clients that we have helped with these solutions include:

- mines
- homes
- agriculture operations
- commercial buildings
- leisure facilities
- exploration companies
- construction companies
- oil and gas companies
- recreational vehicles

We offer a full line of brand-name generator sets including SDMO, Baldor, Hi-Power, Broad Crown and Generac, as well as our own custom-built line of DieselPro generators that are powered by efficient and reliable Perkins, Mitsubishi, or Iveco Diesel Engines.

Configurations? Again, we offer the full gambit: portables for construction sites and camp grounds; silent enclosed units for areas where sound levels are critical; enclosed weather proof units; or open skid mounted units with or without fuel tanks.

All our units carry full manufacturer's "No Hassle" warranty and we keep a great selection of generator sets on hand, including diesel-powered and natural gas generator sets. Products we offer include Iveco engines, Perkins diesel generators, and more.

What's more, you benefit from mega savings that we afford you with our aggressive and competitive pricing on all our generator sets, transfer switches and more. If you are one who would like to build your own diesel generator in Canada, or just need a generator end replacement, we offer a full range of DSG brand generator ends, or alternators as they are sometimes called. These range from 10 Kilowatts to 500 Kilowatts in size.



FOR RENT OR PURCHASE

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CAN-CRANK CAPACITOR

START ANY ENGINE IN EXTREME CONDITIONS

- Not Affected by Temperature
- More Power than 4 Group 31 Batteries
- Cranks Faster & Quicker than Batteries
- Recharges in Less than 10 Seconds
- Can Be Installed to Replace Battery

REPAIR SHOPS, TOWTRUCKS, & FLEETS

Capacitor Powered Portable Jump Start Cart

A Powerful Portable Starting Solution!

- Ease of mobility & rugged design
- Includes 10 ft. 4/0 cables with full power jaw clamps
- Quick disconnect plug
- Includes internal battery for stand alone re-charge of capacitor for remote applications
- Includes reverse polarity and dead short circuitry protection
- Long life cycle performance
- Available in 12 volt and 24 volt models
- Dimensions: 48" h x 20" w x 26" d
- Weight: app. 140 - 170 lbs.



Capacitor Powered Vehicle Mounted Jump Start Box

Can-Crank in a box is designed for easy mounting on your service vehicle or other mobile applications with more power than four Group 31 batteries. The user friendly design allows a single service technician to activate the unit with a 50 ft. heavy duty cord and activation switch. Ideal for remote jump starting applications.

- Packaged in a rugged plastic case
- Includes 20 ft. 2/0 plug to full power jaw clamps and one 10 ft. 2/0 extension cable (plug to plug)
- Quick disconnect plug
- Includes two Group 31 AGM batteries
- Includes reverse polarity and dead short circuitry protection
- Long cycle life performance
- Available in 12 volt & 24 volt models
- Dimensions: 19.5" x 42" x 14.5"
- Weight: 325 lbs. (approx.)
- Available with an optional built-in, automatic AC battery charger to keep internal batteries charged.

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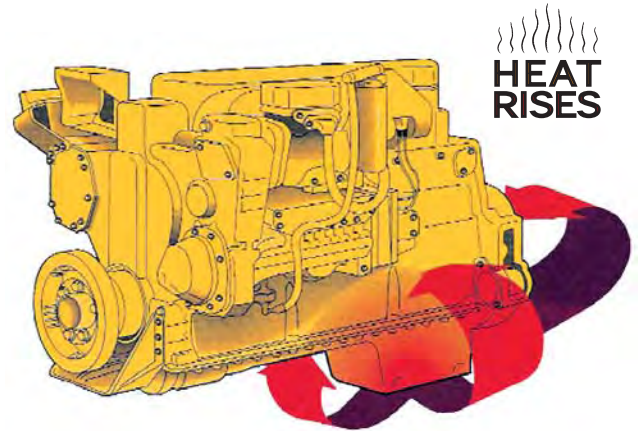
PAN HEATERS

- **Faster to Install - approx. 15 minutes vs. up to 3.5 hours**
- **Less Energy Consumption - typically 250 w vs. 1,000 w**
- **Reduced Engine Wear**
- **Safe - C.S.A. Approved**
- **Fast Heat • typically -40° C to +15° C in 1 - 2 hours.**
- **Compact • less than 1/16" thick.**

Pan Heaters are the simplest and most efficient way to **protect your engine** on cold startups. The **peel and stick** design uses your oil pan as the heat sink. This allows for **even heating** to occur, starting at the bottom. Warm oil provides quicker lubrication to vital engine components **reducing** the need for costly, premature **repairs**.

A typical frost plug heater consumes 600 watts and a 6.6 Litre Duramax heater consumes 1000 watts. Most applications can be covered by a Model 512 pan heater that only consumes 250 watts.

	Model	Size	Watts	Application
120 Volt Heaters	Model 154	2.25" x 4"	125 watts nominal	Engine with 1.5 - 4qt - Oil Hydraulic Tank w/ 1 - 10 Gal.
	Model 156	1.5" x 6"	125 watts nominal	Engine with 1.5 - 4qt - Oil Hydraulic Tank w/ 1 - 10 Gal.
	Model 512	3.5" x 5.25"	250 watts nominal	Engine with 4.5 - 12qt - Oil Hydraulic Tank w/ 10 - 30 Gal.
	Model 1024	(2) 3.5" x 5.25"	500 watts nominal	Engine with 12 - 24qt - Oil Hydraulic Tank w/ 20 - 50 Gal.
	Model 2648	6" x 10.75"	1000 watts nominal	Engine with 26 - 48qt - Oil Hydraulic Tank w/ 50 - 100 Gal.
12 Volt Heaters	Model 12	1.25" x 8"	75 watts nominal	Engine with 1.5 - 4qt - Oil Hydraulic Tank w/ 1 - 10 Gal.
	Model 26	5" x 5"	250 watts nominal	Engine with 4.5 - 12qt - Oil Hydraulic Tank w/ 10 - 30 Gal.



Important Note On Engine Wear

A traditional block (coolant) heater does not heat engine oil. When your engine is started in low temperatures there are two main problems:

1. Thick cold oil is not easily pumped to critical parts of the engine. It is estimated that one cold start at -20° C can reduce engine life by 32,000 kms.
2. On a cold start, gases will pass by the piston rings and come into contact with cold oil. This causes the formation of dangerous sulphuric acid which reduces engine life.



NOTE
Oil pan must have a flat surface for heater to adhere securely.

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