



230V~ 50Hz



## SafeStart 800-series

**Characteristics:** Contact heater

**DEFA no:** 411801-411899, 412801-412899, 413801-413899, 414801-414899, 420801-420899, 421801-421899.

Contact heaters can be divided into two different groups:

- Heaters for engine blocks
- Heaters for oil pans

Contact heaters consist of an element (A) cast in aluminum, which is adapted to fit the installation point (B).

A heat conducting paste is applied to the contact surfaces of the heater in order to improve the transfer of heat from the contact heater to the engine block or oil pan. Contact heaters for oil pans are essentially oil heaters which heat up the oil instead of the coolant.

Fasten the contact heater using the enclosed bracket and fasteners.

DEFA AS is conforming to the requirements of both ISO 9001-2008, ISO 14001:2004 and OHSAS 18001:2007.

In addition to this, our engine heaters and cables are conforming to the requirements of ISO/TS 16949:2002.

### Item number

DEFA no: 411801-411899, 412801-412899, 413801-413899, 414801-414899, 420801-420899, 421801-421899.

Weight: Varies depending on diameter and size.

Up to 26-pack. Varies with the size of the heater.

### Part of

Engine pre-heater is supplied separately because of special adapted solutions for a variety of engines and vehicles.

### Installation

Read and follow the included fitting instructions for your vehicle carefully. The heater should **ONLY** be installed as described in the installation guide. Installation of engine heaters shall be performed by authorized garages.

### Use

**Normal usage** - DEFA engine heaters is dimensioned for "normal usage". DEFA defines "normal usage" as; 3 connections for 3 hours pr. 24 hour based upon 150 users days a year (5 months a year).

**Professional usage** - It is necessary to make a yearly function control and if necessary install a new heater to obtain necessary extent of service on emergency vehicles or power supplies where the heater is connected more or less 24/7. This yearly service cost will not be covered by DEFA AS.

**Pulse power** - Some car parking areas are using interval (pulse) power timers turning the power On and Off several times per hour. Using DEFA engine heater in suchlike parking facilities will not be considered as "Normal use" and claims will be declined.

### Technical specifications

Voltage [V]	230
Power [W]	300-400
IP rating [IP]	44
Test & Approval	EMKO-TUB(61)NO 293/91 EN 60335-1, EMKO-TSB(61) NO293A94

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