
**1 Connecting cable MS**

Câble de raccord MS

**2 Inlet cable MK**

Câble d'entrée MK

**3 Battery Charger BL**

Chargeur de batterie BL

**4 Extension cable SK**

Câble de rallonge SK

**5 Multiple socket**

Prise multiple

**6 Engine heater**

Chauffe-moteur

**7 Cab heater**

 Appareil de chauffage pour  
Habitacle

**8 Heat shield**

Protecteur thermique

**9 Pump**

Pompe

Certified according to:



COMPLIES WITH UL 499 AND CAN/CSA C22.2 no.191-M89

# ASSEMBLY INSTRUCTIONS

## INSTRUCTIONS DE MONTAGE

# TYPE US 480

EFFECT: 550W / 110-120V ~



Eskilstuna, November, 2017

Henrik Gadd, President

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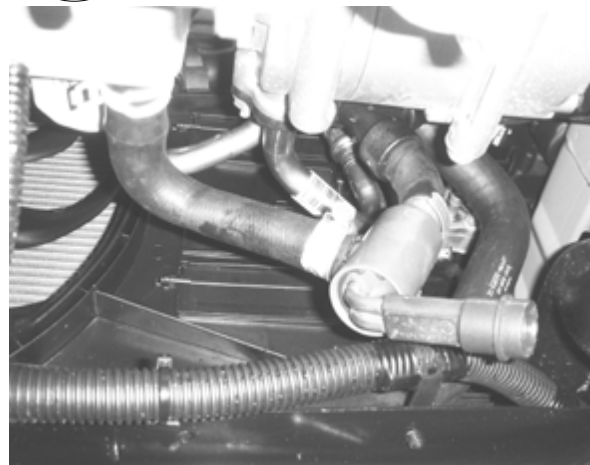
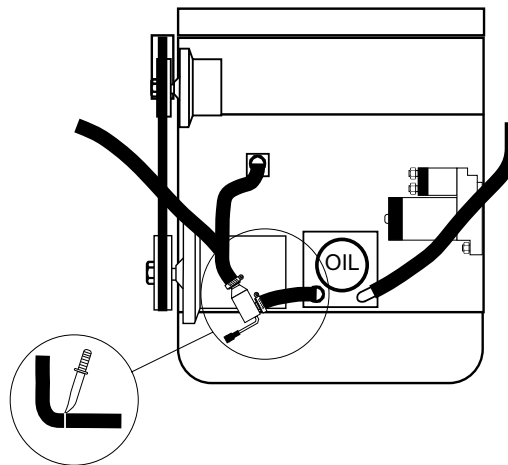
**E-mail:**  
info@calix.se  
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teknik@calix.se  
**Internet:**  
www.calix.se

## US 480

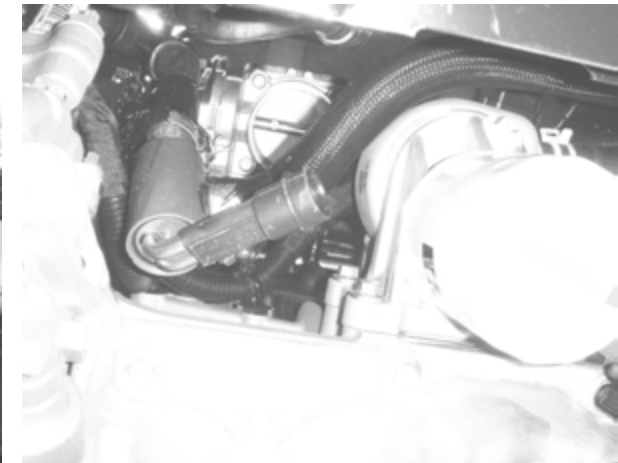
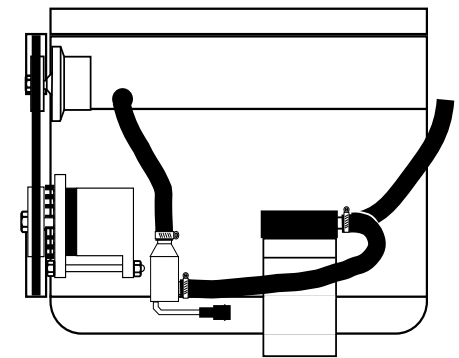
### ENGLISH

**NOTE!** If your vehicle/engine is missing in this assembly instruction:

- Check if an **assembly kit** is required for your vehicle. Information regarding which products to use is available on [www.calix.se](http://www.calix.se), "search product".
- Your vehicle has been added to the assembly instruction in a later edition, the latest edition is always available on [www.calix.se](http://www.calix.se).

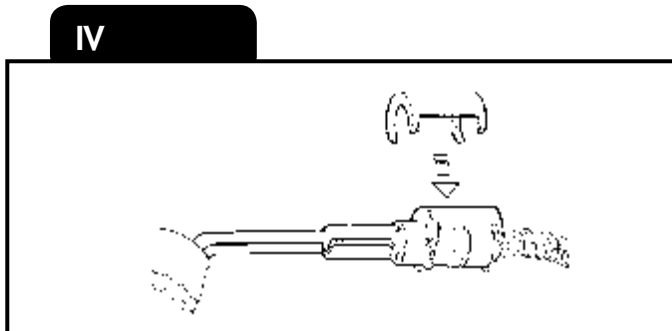
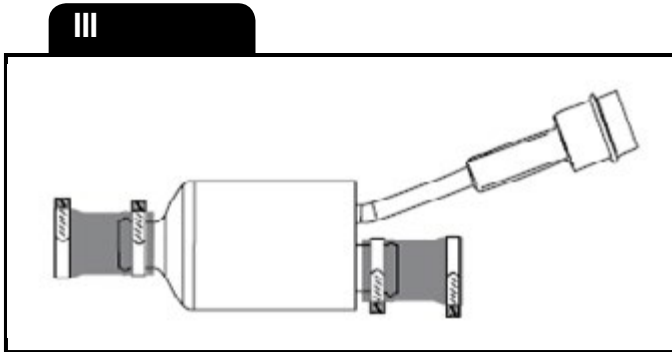
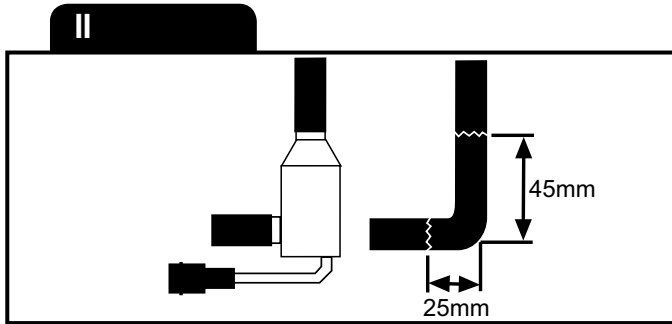
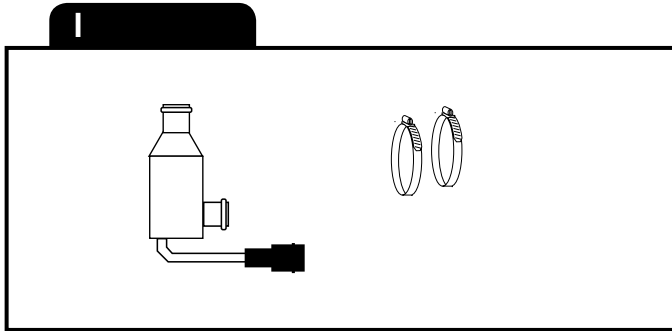


FORD  
C-Max 1.6 EcoBoost 2010-->  
Focus 1.6 EcoBoost 2011-->  
Mondeo IV 1.6 SCTi EcoBoost 2011-->  
S-Max 1.6 EcoBoost 2011-->  
VOLVO  
S60 II T3 2011--> ⚙ B4164T3  
S60 II T4 2010--> ⚙ B4164T  
S60 II T4F 2011--> ⚙ B4164T2  
S80 II T4 2011--> ⚙ B4164T  
V40 T3 2012--> ⚙ B4164T3  
V40 T4 2012--> ⚙ B4164T  
V60 T4F 2011--> ⚙ B4164T2  
V60 T3 2011--> ⚙ B4164T3  
V60 T4 2011--> ⚙ B4164T  
V70 III T4 2011--> ⚙ B4164T  
V70 III T4F 2011--> ⚙ B4164T2



FORD  
Galaxy 2.0 SCTi EcoBoost 2010-->  
Mondeo IV 2.0 SCTi EcoBoost 2010-->  
S-Max 2.0 SCTi EcoBoost 2010-->  
VOLVO  
S60 II 2.0 T 2010--> ⚙ B4204 T6  
S60 II T5 2010--> ⚙ B4204 T7  
S80 II T5 2011--> ⚙ B4204 T7  
V60 2.0 T 2011--> ⚙ B4204 T6  
V60 T5 2011--> ⚙ B4204 T7  
V70 III T5 2011--> ⚙ B4204 T7  
V70 III 2.0T 2011--> ⚙ B4204T6  
XC 60 T5 2010--> ⚙ B4204 T7  
XC 60 2.0T 2010--> ⚙ B4204 T6

⚙ = Engine model  
= Type de Moteur


**ENGLISH**

- A. Read all installation instructions thoroughly and completely. Check that all supplied parts, according to step I, are included. Overview illustrations, details not shown. NOTE! This heater requires an assembly kit in certain cases, see the Calix recommendation table or [www.calix.se](http://www.calix.se) for more information.
- B. Installation of the heater.
1. Drain the coolant.
  2. Install the engine heater on the hose shown in the figure. NOTE! This heater requires an assembly kit in certain cases, see the Calix recommendation table or [www.calix.se](http://www.calix.se) for more information. Where exact measurements are missing by the engine figure, the hose is cut according to figure II. The figures next to the engine illustration show cutting of the hose. Make sure that the hose clamps end up completely inside of the raised parts on the pipe ends, figure III. NOTE! Make sure that the engine heater's housing is not in contact with the engine block or any other equipment.
  3. The cable with the inlet is routed into the engine compartment, and to the engine heater. Push together the quick-coupling between the engine heater and the cable, completely and until it bottoms, so that the O-rings seals tightly and no gap remains. NOTE! Apply a few drops of oil on the O-ring, this facilitates connecting. It is very important that the connection is performed in this manner.
  4. Fill up with coolant and vent the cooling system, see the instruction book. Run the engine and check that there is no leakage.
- C. Fitting of lead-in  
See separate mounting instruction.
- D. Test-running
1. Check that the cooling system is full of coolant.
  2. Make sure that all air has been removed from the cooling system as the heater element will immediately burn out if surrounded by air.
  3. Check that all seals are tight even with the engine warm.
  4. Check the heater by connecting it to an earthed point. A low sizzling noise will be heard when the water on the surface of the heater element boils.
- E. Important
1. Always use anti-freeze in the cooling system.
  2. The engine heater must only be connected to an earthed socket. There must always be a continuous internal earth connection running from the engine heater casing through the body and right up to the earthed point.
  3. Use only Calix MS cable for connection to the mains network.
  4. Inspect the cable periodically for damage or ageing. A damaged cable must be replaced without delay.
  5. No parts of the installation must be allowed to come into contact with moving or hot parts of the engine. The distance to all parts of the exhaust system must be at least 50 mm (2"). (Also applicable for the turbo unit if any.) Otherwise Calix Heat Shield must be used.
- F. Warning  
The heater element can be burnt out if:
- the heater is connected to intermittent (pulsating) voltage
  - the coolant is dirty
  - there is insufficient coolant
  - there is air in the system

- there is sludge in the cooling system
  - radiator cement is added to the coolant
- In such cases the warranty is not valid.

Improper installation procedures can cause serious personal injury. Installation should be performed only by a qualified technician.

- Read all instructions thoroughly before starting.
- Observe all safety precautions when working under a vehicle.
- Beware of sharp edges.
- Always wear safety glasses to help protect eyes.
- Always wear protective gear as gloves and use caution when using hand tools.

Improper use of the engine preheating may cause short circuits, fires and serious or fatal personal injury.

- Always connect the connecting cable to a grounded socket protected by a residual current breaker. The socket must be protected from water, moisture and other fluids.
- Never connect the engine preheating system to an unearthed socket, regardless of whether the socket is protected or not.

Using unsuitable or damaged Sockets and connecting cables and disregarding accepted safety practices may cause short circuits, accidents, and serious or fatal personal injury.

- Never use damaged sockets and connecting cables. Check connectors and cables for damage prior to each use.
- Never modify or repair electrical components.
- Never allow connectors to come into contact with water, moisture and other fluids.

**WARRANTY**

Our products are covered by a 36-month warranty commencing on the date of purchase. The warranty applies to defects in material or manufacture. This warranty does not cover defects arising from incorrect assembly or installation, or from inappropriate use. In case of a claim under this warranty, return the defective item/part together with the receipted invoice, to your Calix dealer. All other claims are excluded from this warranty unless our liability is legally mandatory.

**GARANTIE**

Nos produits sont couverts par une garantie de 36 mois à partir de la date d'achat. La garantie s'applique aux défauts de matériau et de fabrication. La garantie ne couvre pas les défauts causés par une installation ou un assemblage incorrect, ou par une utilisation inadaptée. Pour faire valoir cette garantie, renvoyez la pièce/l'élément défectueux accompagné de la facture à votre distributeur Calix. Toute autre demande est exclue de cette garantie, sauf si notre responsabilité est juridiquement imposée.

Recommended connection period for engine pre-heater Temps de connection recommandé					
C°	-20 C°	-10 C°	-5 C°	0 C°	+10 C°
Hours	3	2	1,5	1	1