



122R00_PLANAR-2D

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CHAUFFAGE DE L'HABITACLE

REGLEMENT ECE 122R00

TYPE DE CHAUFFAGE: PLANAR-2D



SCHEMAS ET PHOTOS FOURNIS
DRAWINGS AND PHOTOGRAPHS SUPPLIED

Schéma ou photographie l'étiquette du constructeur:
Photograph or drawing of the manufacturer's label

Page 5

Schéma ou photographie du système de chauffage à combustion:
Photograph or drawing of the combustion heater

Page 6

Notice de montage du chauffage à combustion et de ses composants:
Mounting description of the combustion heater and all its components

Page 7-12



1. **GENERALITES**
GENERAL

- 1.1 Marque (raison sociale du constructeur): **ELECTRUS**
Make (trade name of manufacturer)
- 1.2 Type: **PLANAR-2D**
Type
- 1.2.1 Dénomination(s) commerciale(s): **PLANAR-2D-24**
Commercial name(s) **PLANAR-2D-12**
- 1.3 Nom et adresse du constructeur: **LLC «ELECTRUS»**
Name and address of manufacturer
**Novo-Sadovaja str. 106
Samara, 443068,
Russia**
- 1.4 Dans le cas d'éléments constitutifs, emplacement et méthode de fixation de la marque d'homologation ECE: **Label on the top of the heater**
In the case of components, location and method of affixing of the ECE approval mark
- 1.5 Adresse des ateliers de montage: **ADVERS Ltd**
Address(es) of assembly plant(s) **443068, Samara,
Novo-Sadovaja str. 106,
Russia**
TEPLOSTAR Ltd
**446253, Region Samara,
u.v. Bezenchuk,
Central str. 111,
Russia**



2. **CHAUFFAGE A COMBUSTION**
COMBUSTION HEATER

- 2.1 Marque (raison sociale du constructeur):
Make (trade name of manufacturer) ELECTRUS
- 2.2 Type: PLANAR-2D
Type
- 2.2.1 Dénomination(s) commerciale(s):
Commercial name(s) PLANAR-2D-24
PLANAR-2D-12
- 2.3 Moyens d'identification du type, s'il est indiqu  sur le
syst me de chauffage:
*Means of identification of type, if marked on the
heating system* Label on the heater
- 2.4 Emplacement de cette marque:
Location of that marking On the top of the heater
- 2.5 Nom et adresse du constructeur:
Name and address of manufacturer LLC «ELECTRUS»
Novo-Sadovaja str. 106
Samara, 443068,
Russia
- 2.6 Adresse des ateliers de montage:
Address(es) of assembly plant(s) See 1.5
- 2.7 Pression d' preuve:
Test pressure not applicable
- 2.7.1 Pression d' preuve de l'unit    basse pression:
Test pressure low-pressure unit not applicable
- 2.8 Description d taill e, plan de masse et notice de
montage du chauffage a combustion et de l'ensemble
de ses  l ments:
*Detailed description, layout drawings and mounting
description of the combustion heater and all its components* Pages 6-12
- Carburant Diesel
Fuel
- Fluide caloporteur Air
Transfer medium



122R00_PLANAR-2D

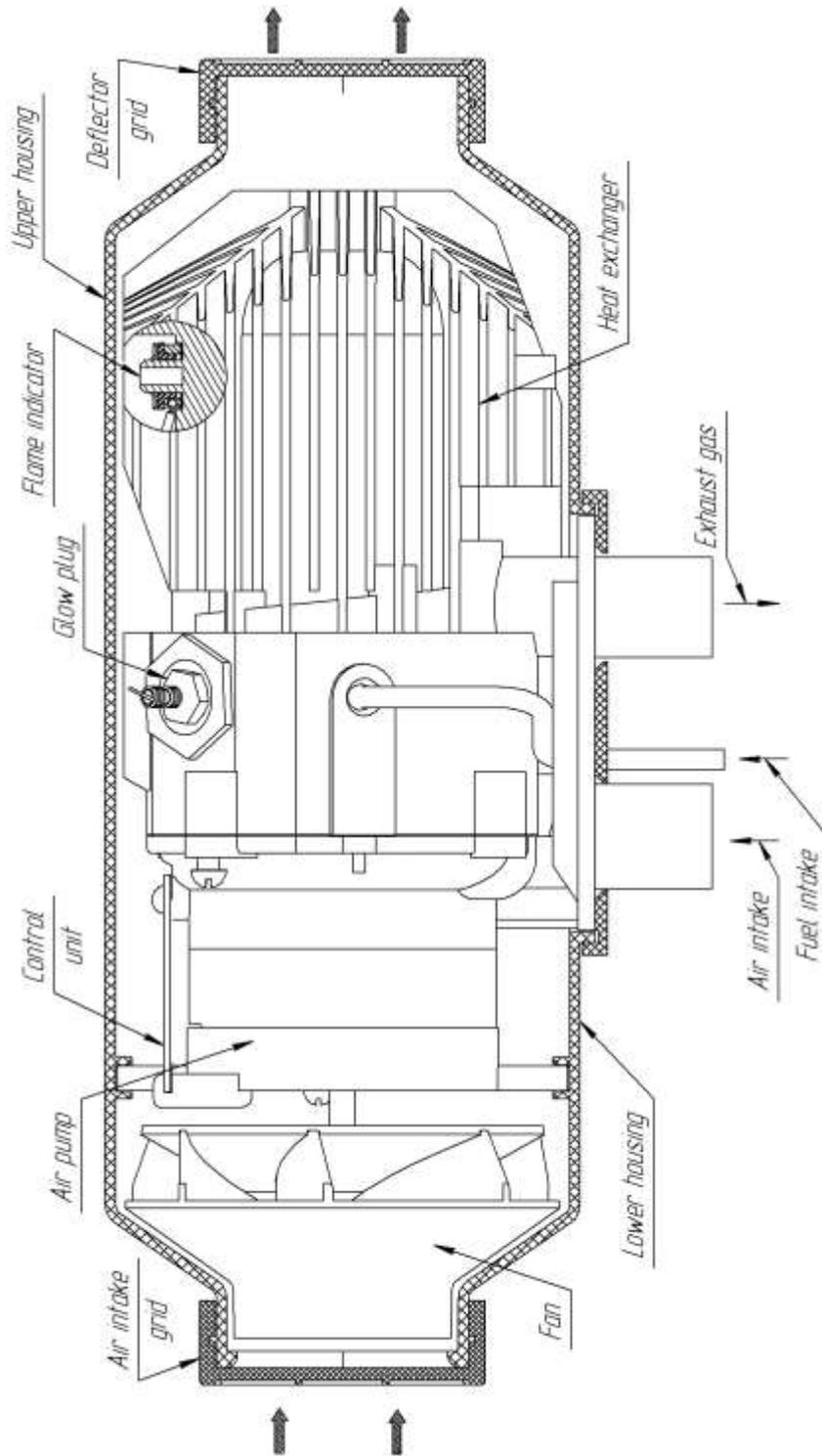
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Photograph of the manufacturer's label





Drawing of the combustion heater





MOUNTING DESCRIPTION

8. Installation Requirements

8.1 Heater Installation

Installed the heater indoors while bearing in mind the permissible operating positions shown in Figure 8.1.

The figure 8.1 shows the two maximum assembly positions of the heater.

Positioned the heater's inlet vent in such a way to prevent absorption of vehicle/heater exhaust gas in normal operating conditions.

The gap between the walls/partitions and the edge of the inlet vent shall be at least 50 mm (see Figure 8.1). The distance between the walls/partitions and the edge of the outlet vent shall be at least 150mm.

When assembling or operating the heater, ensure that no foreign objects enter the inlet/outlet vents. Prior to assembly, ensure availability of spare heating plug and bear in mind dismantlement requirements, as this will permit easier maintenance in future.

At installation of the heater check that its case had no contact both with a floor and with other parts of a cabin or a manned compartment. See Figure 8.2 for how to position mounting holes to install the heater into the motor vehicle casing.

At installation to the heater of air ducts, they shouldn't have the deformations reducing the section through passage of an air duct. The maximum length of an output air duct shouldn't exceed 5 meters of total length.

ATTENTION ! To ensure reliable performance, follow the above recommendations carefully. Install the heater horizontally as shown in Figure 8.1.

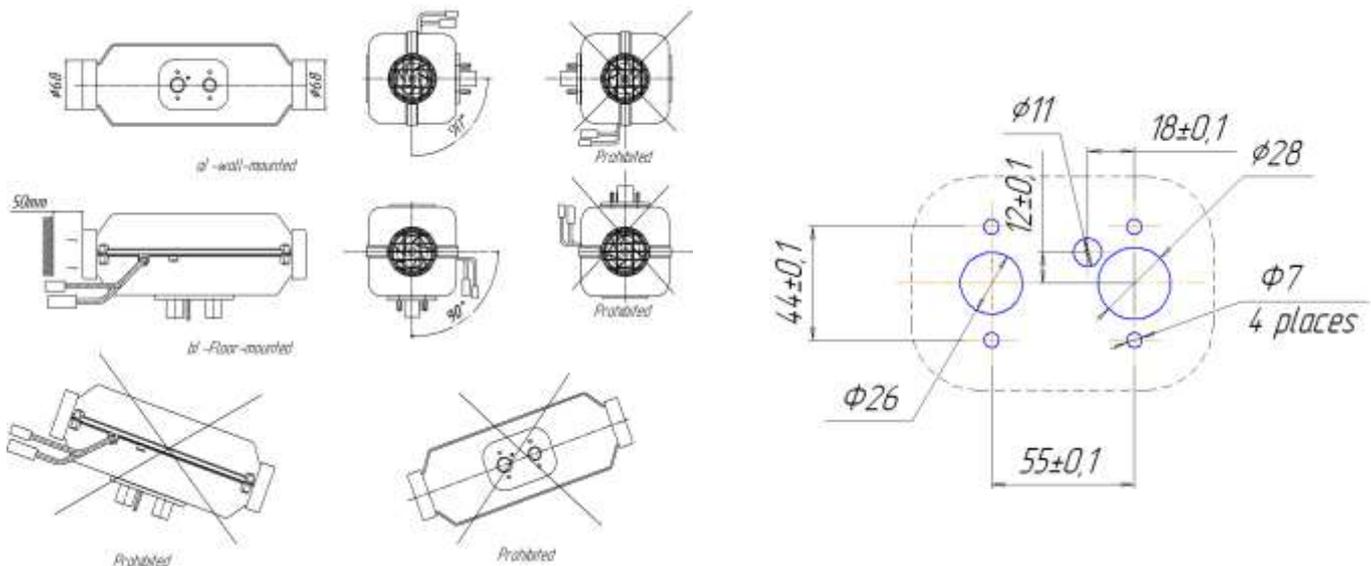


Figure 8.1 – Variants of installation of a heater // Figure 8.2– Mounting Holes Used for Heater Installation



8.2 Air Inlet Installation

Air necessary for burning, should not be soaked up from salon or a cabin and a car luggage space. Position the pipe's air inlet vent to prevent snow entering or choking the pipe and to allow incoming water to run off.

The entrance aperture of an air inlet is forbidden to have against a running air stream at car movement.

8.3 Exhaust Pipe Installation

When installing the exhaust pipe, be mindful of its high operating temperature. Cut the exhaust pipe (a flexible corrugated metal hose) to size.

Fix the exhaust pipe in place using clamps and position it at a slight angle following the trajectory of gas flow. To protect some parts of the vehicle (electric wiring and other harness) from high temperatures, there must be heat insulation installed. (pos.3, fig.7.1)

To achieve a tight fit, prior to connecting the exhaust pipe to the heater pipe, make a saw-cut of about 15mm along the length of the exhaust pipe without going beyond the gripped part of the pipe. Ensure that the end of the exhaust pipe does not come into contact with the rubber seal of the heater.

Direct exhaust gas outside. Position the gas outlet vent and the air inlet vent in such a way as to prevent exhaust gas from entering the combustion chamber.

Ensure that exhaust gas does not enter the passenger compartment of the vehicle and that it does not get sucked in through the vehicle fan.

Do not allow exhaust gas to affect the performance of vehicle components. Position the exhaust pipe outlet vent so as to prevent snow entering or choking the pipe and to allow incoming water to run off. At the vent of the exhaust pipe the screen is installed, this necessary for stable operation of the heater while working low idle. If this screen is not installed, install it according fig.7.1

The exhaust outlet of an exhaust pipe is forbidden to have against a running air stream at car movement.

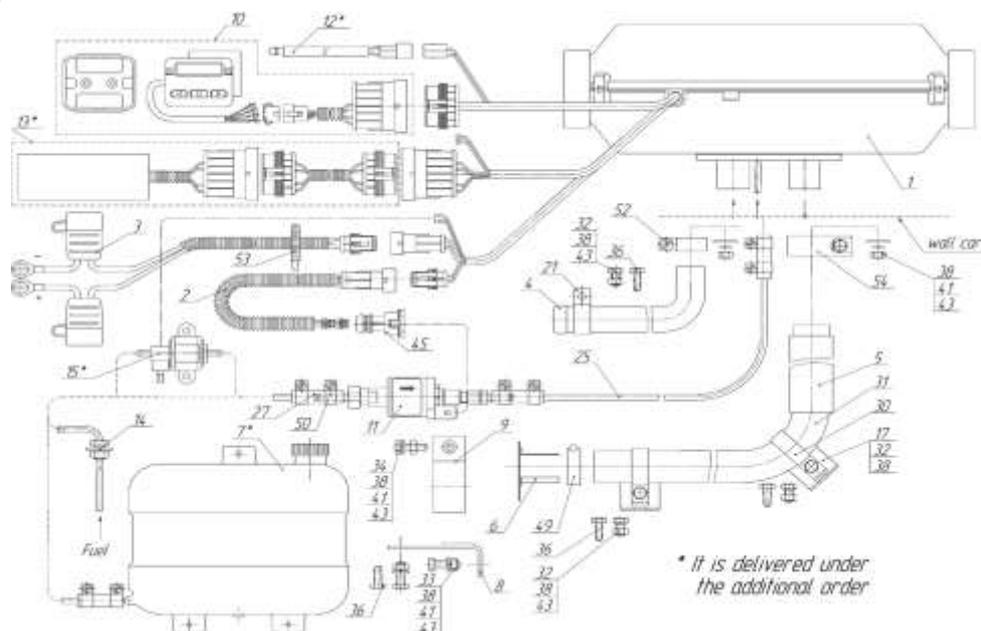


Figure 7.1 – Connection Diagram of Basic Heater Components



8.4 Installation of a fuel tank on the car

The fuel tank is established according to figure 8.3. A fuel tank it is necessary to have so that the exit of fuel which can flow out from its bulk mouth, on the earth was provided.

The bulk mouth of a fuel tank should not be in salon, a luggage carrier, in a motor compartment. If the bulk mouth is located on a vehicle lateral face the filler cap in the closed position should not support car's body dimensions. Fuel which can spill at filling of a fuel tank, should not get on exhaust systems and electro wires. It should be taken away on a ground.

For the purpose of an exception of leak of fuel from a fuel tank by gravity at infringement of tightness of the fuel pump, a fuel tank it is preferable to have so that the fuel maximum level was below a cut of a fuel tube of a heater.

Figure 8.3 - Installation of a fuel tank on the car

ATTENTION!

Before a heating season it is necessary to check a fuel tank. If the fuel was stored long time in a tank (for example from last heating season), it needs to be removed! To wash out a tank with gasoline or kerosene and to fill in new diesel fuel. This procedure is intended for removal of a deposit in fuel at long storage. Not performance of this procedure can lead to a contamination or failure of the fuel pump and the raised sooting in the combustion chamber

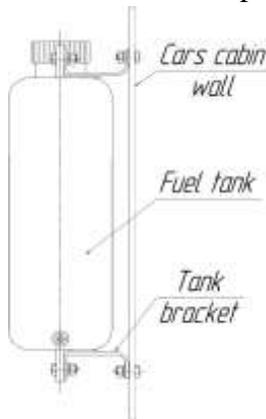


Figure 8.3 - Installation of a fuel tank on the car



8.5 Installation a fuel supply intake in a regular tank of the car

Fuel can enter the heater through a fuel supply intake from the regular fuel tank of the car.

Fuel supply intake must be installed into regular fuel tank of the car according to fig. 8.4,a).

Perform installation of special washer with fuel supply intake to the tank inlet according to fig.8.4,b)

Perform installation of the fuel supply line from fuel supply intake to the heater according to fig.8.5.

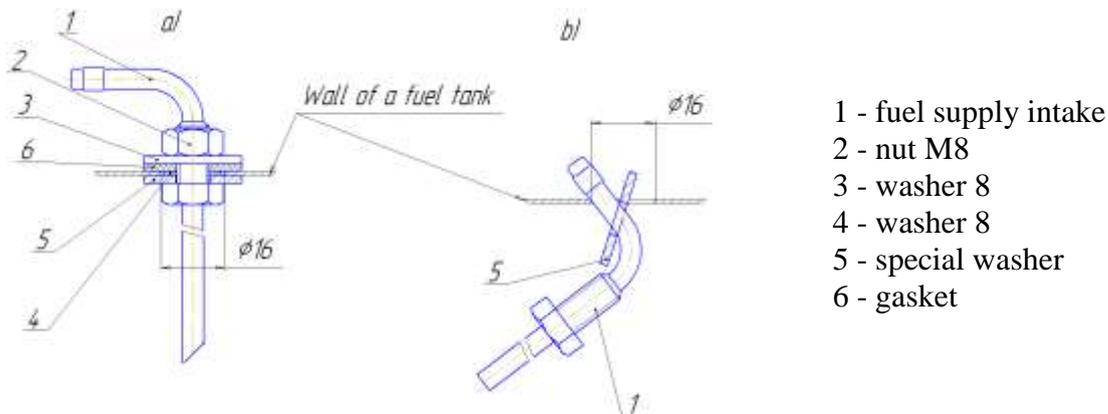


Fig 8.4 – Fuel supply intake installation in a regular tank of the car

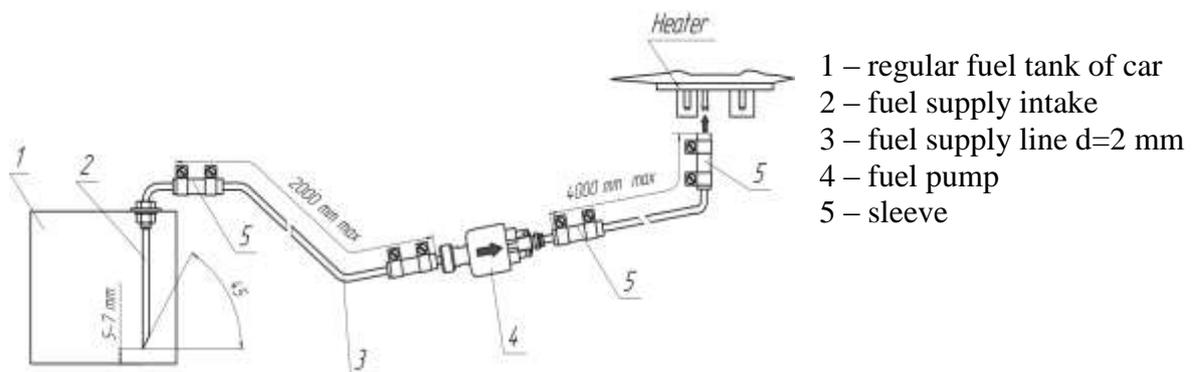


Figure 8.5 – Installation Diagram for Heater Fuel Supply System Using a fuel supply intake



8.6 Installation of Heater Fuel Supply System

8.6.1 Installation of Heater fuel pump

The fuel supply pump should be mounted as close to the fuel tank as possible and positioned below the tank's lower fuel level.

The scope of supply heaters enters fuel pump manufacturing ADVERS company. The spatial position of the fuel supply pump must comply with figure 8.6 (preferably in a vertical position).

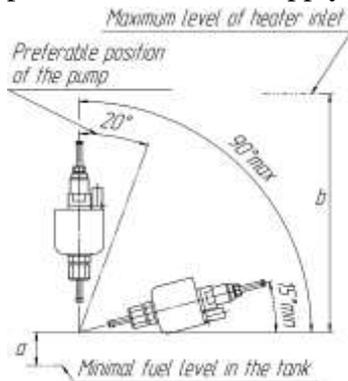


Figure 8.6- Permissible mounting position of fuel pump

8.6.2 When installing the fuel supply line, do not allow connecting sleeves to bend. Use a sharp knife to cut the fuel tube. The cutting location shall be free of indentations, hairs and must not restrict flow through the tube.

ATTENTION

1. Do not allow the fuel supply line or fuel supply pump to overheat. Do not install the fuel supply line and fuel supply pump near the exhaust pipe or on top of the engine.
- 2 The fuel supply line connecting the fuel supply pump to the heater should be installed at the same lifting angle.

8.7 Installation of Heater Electric Circuit

Heater wire harnesses shall be installed in compliance with the heater wiring system.

When installing, do not allow the wire harnesses to become overheated, deformed or dislodged during vehicle use.

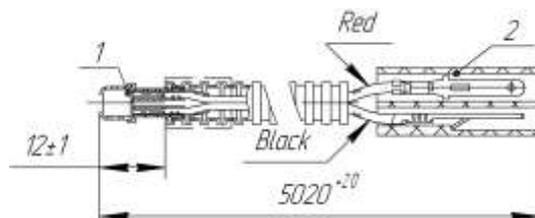
Attach the harnesses to the vehicle fittings using plastic clamps.

Attention! Remove the fuse prior to installation.

8.8 Installation the sensor in a cabin.

The sensor in a cabin (fig. 8.8) is intended for air temperature measurement in a zone of its installation and allows to work in a mode of maintenance of the set temperature within $15 \div 30^{\circ}\text{C}$. The sensor is installed in a cabin (or the manned volume of vehicle) in a place convenient for the driver (personnel).

The maximum length of a cable of the sensor is 5000mm. After installation the of the sensor it must be connected to the XS4 socket of the heater.



(1 - microcircuit; 2 - Connector)

Figure 8.8 – The sensor in a cabin.



8.9 Installation the electromagnetic locking valve.

The electromagnetic locking valve serves for giving or overlapping of supply of fuel in a heater. The valve is installed in front of the fuel pump and prevents supply of fuel in idle at present a heater.

Normally the valve — is closed. When giving on valve the supply voltage the coil of an electromagnet takes away a rod with a locking element from a saddle of the valve and opens the pass for a fuel.

At removal of supply voltage from the valve the returnable spring presses a rod with a locking element to a saddle of the valve blocks the pass for a fuel.

9. Post-installation Testing

9.1 When installing, ensure that:

- the fuel supply lines of the fuel supply system are leak-proof and all clamps are securely tightened,
- the electric contacts of the harnesses and heater elements are securely installed,

9.2 Install fuse 25A .

9.3 Fill the fuel pipe system with fuel with the help of fuel pumping device (fuel pumping device YIIT-1 can be ordered at manufacturer) or repeated inclusion of a heater.

After filling the system check that the fuel pump system is not leaking.

9.4 Check that the heater is working on min and max modes:

The process of activation begins with purging of the combustion chamber. After purging the process of combustion begins and the heater goes on working in operation mode.

9.5 Deactivate the heater. While switching off the heater the fuel stops entering and the process of ventilation of the combustion chamber and heat exchanger starts.

9.6 Activate the heater while the vehicle engine is running and ensure that the heater is operational.

ATTENTION!

1 When performing initial ignition following installation, the fuel supply line should be filled with fuel using a fuel pumping device until the fuel level reaches the inlet plug of the heater. If there is no pumping device, restart the heater as many times as necessary to fill the fuel supply line.

2 Remember that each time the heater fails to start at the first attempt, the heater will be restarted automatically by the control unit. If the heater is not activated after 2 attempts, there will be malfunction code on the Control panel.