



122R00\_ADVERS 14TC-Mini

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## **CHAUFFAGE DE L'HABITACLE**

### **REGLEMENT ECE 122R00**

TYPE DE CHAUFFAGE: ADVERS 14TC-Mini

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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*

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1. **GENERALITES**  
**GENERAL**

- 1.1 Marque (raison sociale du constructeur): ADVERS  
*Make (trade name of manufacturer)*
- 1.2 Type: ADVERS 14TC-Mini  
*Type*
- 1.2.1 Dénomination(s) commerciale(s): ADVERS 14TC-Mini-24  
*Commercial name(s)* ADVERS 14TC-Mini-24-GP  
ADVERS 14TC-Mini-12-GP
- 1.3 Nom et adresse du constructeur: LLC «ADVERS»  
*Name and address of manufacturer* 443068, Samara,  
Novo-Sadovaja str. 106  
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  
*In the case of components, location and method of heater*  
*affixing of the ECE approval mark*
- 1.5 Adresse des ateliers de montage: LLC «ADVERS»  
*Address(es) of assembly plant(s)* 443068, Samara,  
Novo-Sadovaja str. 106  
Russia  
  
LLC «ADVERS»  
446253, Region Samara,  
u.v. Bezenchuk,  
Central str. 111, Russia



## 2. **CHAUFFAGE A COMBUSTION** **COMBUSTION HEATER**

- 2.1 Marque (raison sociale du constructeur): ADVERS  
*Make (trade name of manufacturer)*
- 2.2 Type: 14TC-Mini  
*Type*
- 2.2.1 Dénomination(s) commerciale(s): ADVERS 14TC-Mini-24  
*Commercial name(s)* ADVERS 14TC-Mini-24-GP  
ADVERS 14TC-Mini-12-GP
- 2.3 Moyens d'identification du type, s'il est indiqu  sur le  
syst me de chauffage: Label on the heater  
*Means of identification of type, if marked on the  
heating system*
- 2.4 Emplacement de cette marque: On the top of the heater  
*Location of that marking*
- 2.5 Nom et adresse du constructeur: LLC «ADVERS»  
*Name and address of manufacturer* 443068, Samara,  
Novo-Sadovaja str. 106  
Russia
- 2.6 Adresse des ateliers de montage: See 1.5  
*Address(es) of assembly plant(s)*
- 2.7 Pression d' preuve: 2,5 bars  
*Test pressure*
- 2.7.1 Pression d' preuve de l'unit    basse pression: not applicable  
*Test pressure low-pressure unit*
- 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: Pages 7-10  
*Detailed description, layout drawings and mounting  
description of the combustion heater and all its components*
- Carburant Diesel  
*Fuel*
- Fluide caloporteur Coolant  
*Transfer medium*



122R00\_ADVERS 14TC-Mini

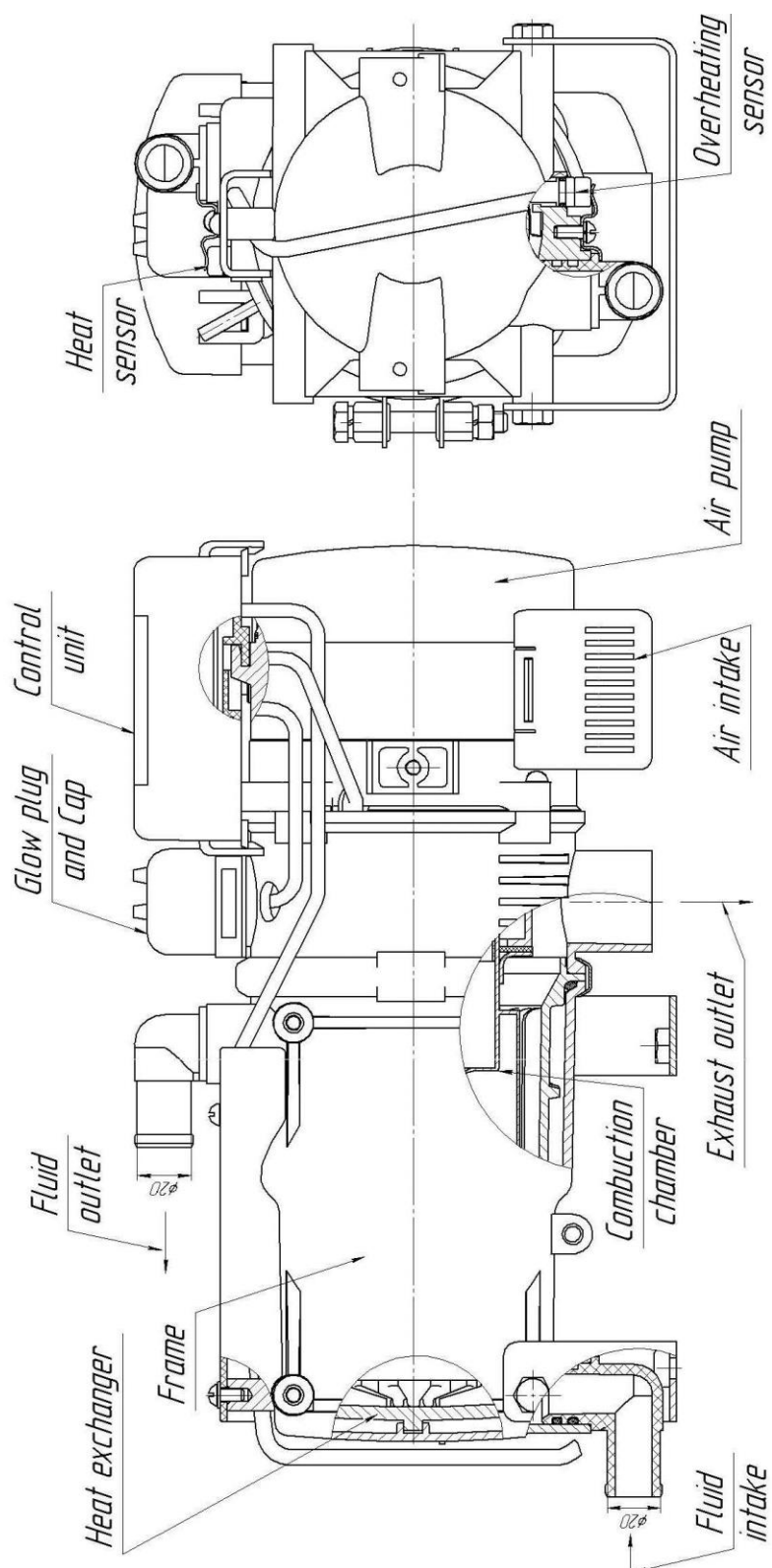
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**Photograph of the manufacturer's label**





**Drawing of the combustion heater**





## MOUNTING DESCRIPTION

### 10 Installation specifications for pre-heater and its assemblies

The pre-heater 14TC-Mini with installation kit are performed for installation on any trucks with liquid cooling system.

10.1. General instructions for installing the heater.

10.1.1. Heater and Motor air pump shall be located lower the radiator overflow tank.

10.1.2. Check up fluid flow in the heater and the engine cooling system; be sure it has the same direction.

10.1.3. Remove air blocks from the engine cooling system and the heater on completion of the heater installation. All the pipe junctions shall be leak-proof.

10.1.4. Fuel and coolant pipes shall be assembled in a way avoiding their contact with hot or vibrating components of the vehicle.

10.1.5. It is unacceptable to operate the pre-heater with the cooling fluid frozen.

10.1.6. On completion of any activities with the cooling system (repair work, cooling fluid changeout) it shall be purged to remove air blocks as per 10.1.3.

#### 10.2 Heater installation

The heater is recommended to install in the area under the bonnet of the vehicle on the frame. The pre-heater installation on engine, in cabin or passengers compartment is prohibited.

Installation shall be performed taking into consideration permissible working positions of the pre-heater according to figure 7 and item 10.1. and 10.1.2.

Install the pre-heater taking into consideration the accessibility to main assemblies electronic control unit, temperature and overheating sensors, air intake, fuel pump.

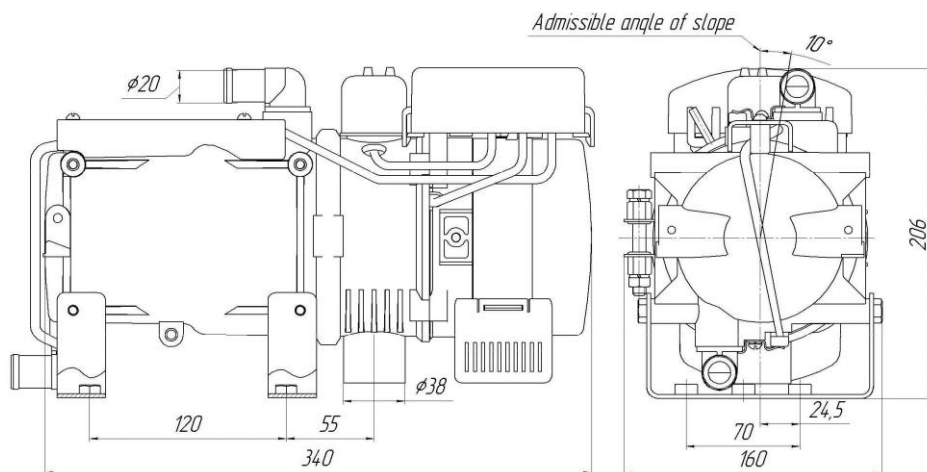


Figure 7- Allowable working positions of the pre-heater



### 10.3 Installation of the motor pump

The motor pump shall be located in conformity with recommendations given in items 10.1.1 and 10.1.2.

Operating position of motor pipe is whatever from horizontal to vertical with the pump down.

### 10.4 Installation of the exhaust pipe

Note that exhaust pipe has high operating temperature.

The exhaust pipe is fixed with clamps slightly downwards in the direction of exhaust. Round holes 3 mm in diameter for moisture drain shall be made at bends in the lowest points of the pipe.

To optimize connection with the heater fitting and to guarantee better sealing there shall be done a lengthwise cut on the exhaust pipe. The cut shall be the same length as the male fitting. The exhaust pipe shall not transcend the overall dimensions of the vehicle. Discharge gas shall be vented out. The exhaust outlet and combustion air inlet shall be located so that to avoid resuction of discharge gas. As well, there shall be taken measures to avoid penetration of this gas inside the passenger compartment or their absorption by the fan. Moreover discharge gas shall not affect operation of the other assemblies of the vehicle.

The exhaust outlet shall be assembled so that to avoid its blockage, ingress of snow and free drain of water. It is prohibited to locate the outlet against the incident flow.

### 10.5 Fuel tank installation

Fuel tank is installed according to figure 8. The filler of the tank shall not be installed in the cabin, motor area, luggage rack of the vehicle. If the filler of the tank on the side of the vehicle, the plug in close position shall not project the vehicle dimensions. Fuel that could be spilled while filling the fuel tank shall not fall on the exhaust system or electric circuit. It shall be drained on the ground.

To exclude leakage of the fuel from the tank if fuel pump leak tightness is failed, the fuel tank shall be installed so that max fuel level is lower than the pre-heater fuel pipe cut.

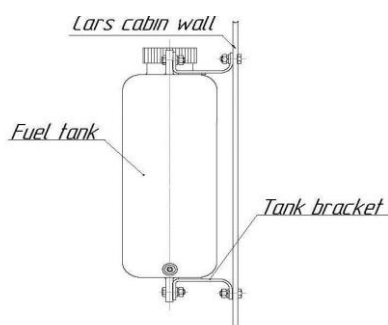


Figure 8-Fuel tank installation on vehicle





## 10.6 Fuel pump and fuel pipe installation

10.6.1. It is advisable to install fuel pump close to the fuel tank and lower fuel level in the tank. To provide this recommendation it's possible to disconnect fuel pump from the heater and cut rubber pipes to pieces 70 mm length and use the as connecting pipes. It is necessary to improve the harness to the fuel pump from the control unit that is to change connector and use extender.

Connect fuel pump, fuel supply line and fuel tank according to figure 9.

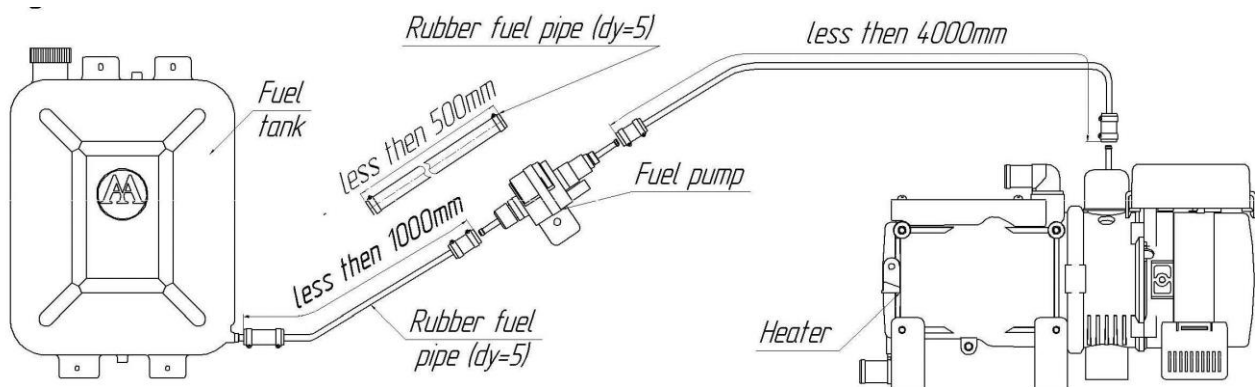


Figure 9. Diagram of connection fuel line with the pre-heater

10.6.2 While assembling the fuel pipe shall be cut only with a sharp knife.

Cutoffs shall be free of restriction, dents and burrs.

**Attention!** The fuel pipe and fuel pump shall be protected from heating. It is prohibited to install them close to the exhaust pipe or on the engine.

## 10.7 Assembling of the pre-heater electrical harness

The pre-heater wiring harness shall be connected as shown in Figure 4.1 (pre-heater electric circuit). While assembling note that heating, deformation or displacement of harness during operation of the vehicle is unacceptable. The wiring harness shall be fixed with plastic clamps to the components of the vehicle.

**Attention!** Assembling shall be performed with the safety devices dismantled

## 10.8. Installation of the control panel

Control panel is installed in the cabin on the dashboard or any other comfortable for the driver place.



### 10.9 Modem installation

The modem is installed in a car cabin – in the "pure" place protected from external influence. The antenna finishes and brought to "open space" (on a windshield).

### 11 Post-installation check out

11.1 On completion of the assembling, the following shall be guaranteed:

- leak profess of the fluid system;
- leak profess of the fuel pipes;
- security of the pre-heater electric contacts attachment

11.2 Open the heater control valve to full. Remove air blocks from the fluid system of the vehicle following instructions of the vehicle manufacturer. Put vehicle heater fan switch in position of min rotation.

11.3 To check a heater on working capacity having pressed the middle button of the control panel. Heater start has to follow. Further work of a heater takes place in an automatic mode.

During the test the pre-heater will go through all the modes («full», «medium», «low», «cooling down», switching on cabin heater fan at cooling liquid temperature 55°C (131°F).

At the request of the user the heater can be switched off earlier, having pressed the central button of the control panel.

If in the course of start or work of a heater on any reason there was a failure, on the control panel the malfunction code will be displayed. You can watch interpretation of a code of malfunction in section 8 of this manual.

11.4 Start the heater with working engine of car and check how the heater works.