

Airdrome

Multivolt

User Manual

English

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Warning

Never disconnect the power from the diesel heater while it is running, this can cause the electronics in the unit to melt or be damaged. Turn off the diesel heater with the shut-off button and let the diesel heater go through its cooling process before any disconnection.

Installation

Ventilation If the space

where you install the diesel heater is less than 0.5cbm and the hot air is led further into another space, the space should be ventilated to counteract heat build-up. To ventilate the diesel heater space, you can choose to take the combustion air from inside this space, this creates a large air turnover because the air used for combustion will then be led out of the space through the exhaust pipe.

Fuel

The fuel for the diesel heater

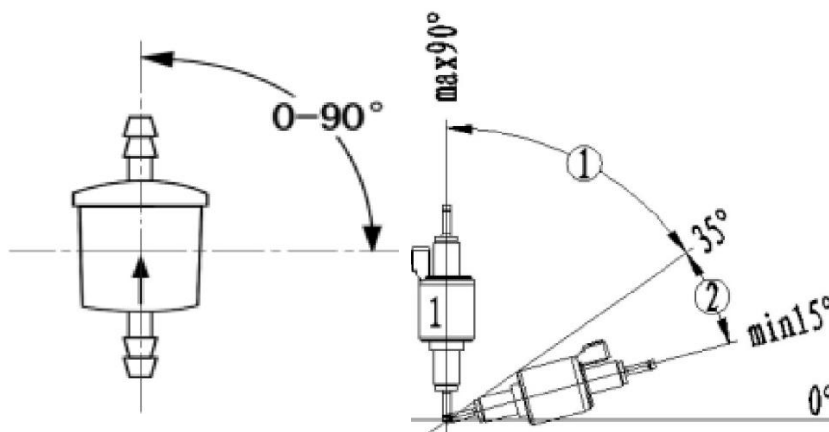
can be taken either from the tank intended for the diesel heater, or an external tank or the vehicle's original tank if the heater is mounted in a vehicle.

The fuel pump should be located as close to the fuel tank as possible, maximum 1m from the tank and no more than 4m from the diesel heater. The fuel filter is mounted with the outlet facing up near the outlet of the fuel tank and before the fuel pump. The fuel pump must be installed in an upward tilted direction to prevent any air bubbles from accumulating in the pump. Air in the fuel pump will significantly shorten the life of the pump because the diesel lubricates the pump. An angle of at least 1.5degrees upward slope is recommended (pump outlet higher than its inlet)

Recommended angle 0-90°

(1) Recommended angle 15-90°

(2) Optimal angle 15-35°

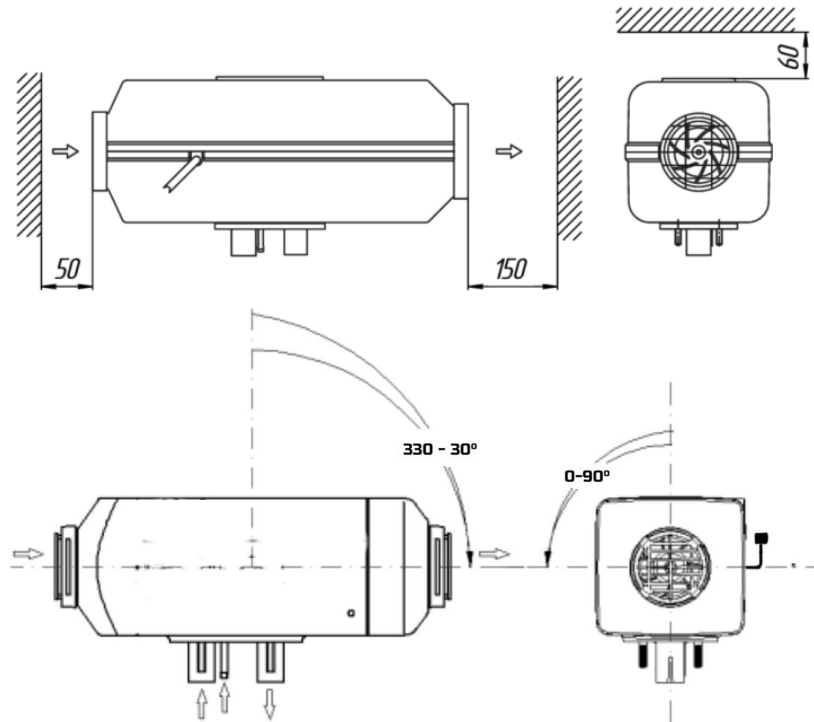


Fuel Filter

Fuel Pump

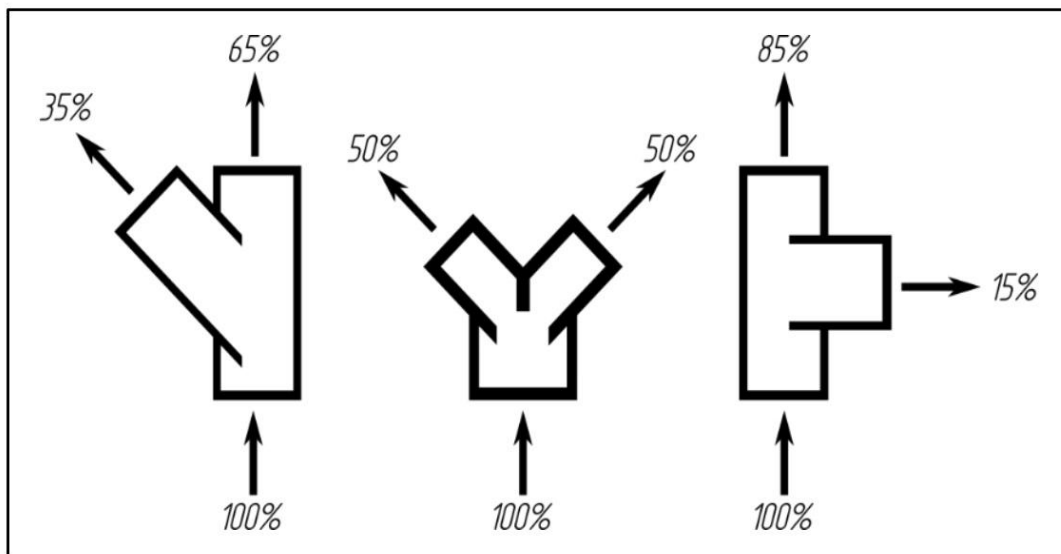
Placement

The diesel heater can be installed in a rotated position with the exhaust gas horizontally and the cable piece upwards or a downward tilt of 30°. Leave at least 60mm free from the sides & top of the diesel heater and at least 50mm from the cold air intake to the nearest wall.



Flow calculations

Choose the right couplings for your purpose

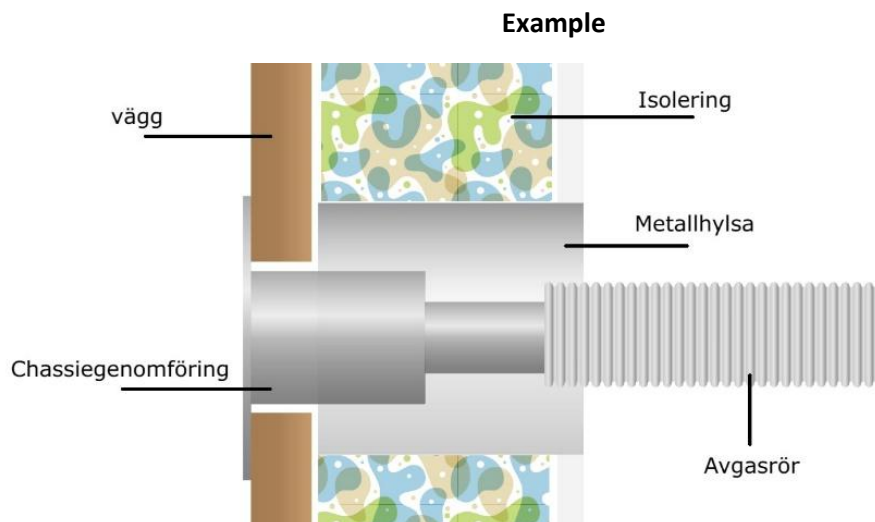


Exhaust gases

We never advise that the exhaust gases are released into a space you plan to stay in, if the diesel heater is installed in the space you are going to stay, the exhaust gases must be led out. The length of the exhaust pipe should not exceed 200cm, this is because the air flow is negatively affected. The exhaust pipe should have a constant downward slope of at least 10° to prevent condensation from accumulating in the pipe. The muffler is mounted upright with the attachment upwards and the drain hole down. The muffler must NOT be installed inside due to the fact that exhaust gases may creep through the drain hole.

Exhaust pipe through combustible materials

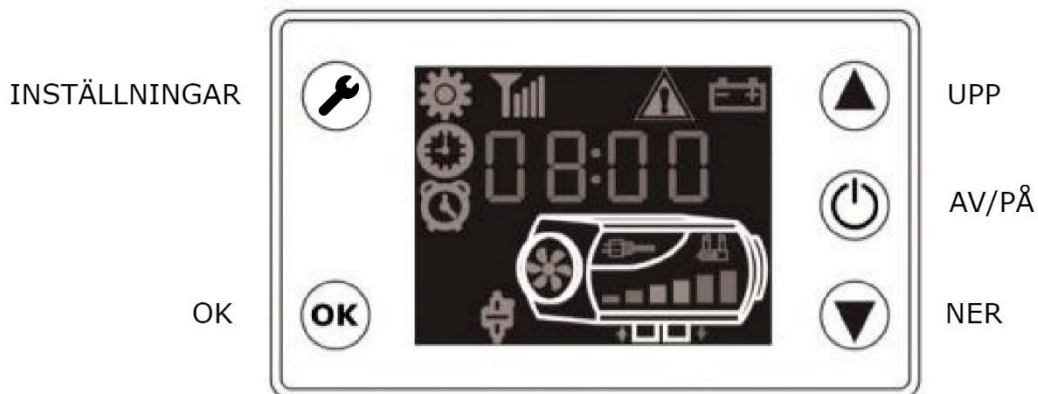
The exhaust pipe can reach temperatures up to 350 degrees; therefore, you should be very careful when passing the exhaust pipe through combustible materials. The hole in the wall or floor should be made larger than the exhaust pipe, recommend at least 50mm in diameter. Insulate the exhaust pipe with flame retardant insulation material and ensure that the exhaust pipe never comes into contact with anything that could catch fire.



Power

If the power cables need to be extended, a cable area of at least 4mm² should be used to prevent voltage drops. The display cable can be extended to be able to place the display further away from the unit. Original extension can be found at your dealer. The polarity of the diesel pump works in both directions.

Features of the LCD display



Change between thermostat & power mode

, hold down arrow **down** & **arrow up** at the same time



Adjust up temperature or power

Press up arrow up



Adjust down temperature or power

Press arrow down



Primea fuel line

Hold down settings and **arrow down**, set running time with **arrows** & **settings** –

start the prime then with **ok**



Set the time of the clock

Hold down **settings** & **ok**, set the current time



Set on/off timer

Hold down settings and **arrow down**, press **settings** until lights up . Set the number of hours and minutes to start, for timer-2 the time is counted down from timer-1 being

activated.



Sync a new remote control or **ARCTIC LINK**

Hold down **Settings** & **arrow up**, then press **ON** on the remote control.

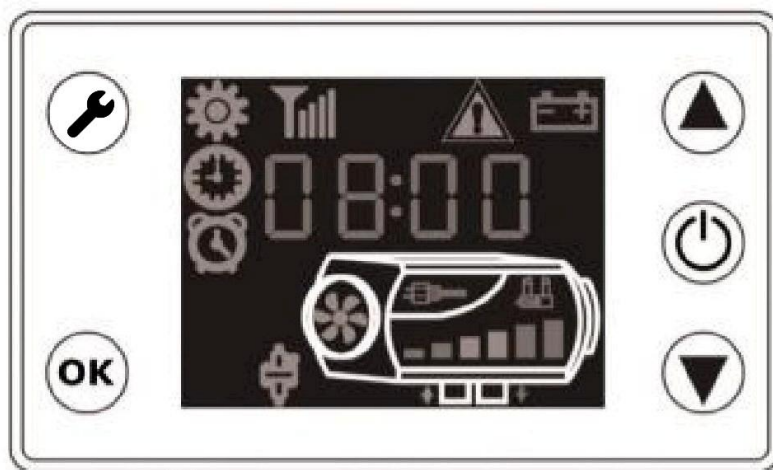
The diesel heater should start if the coupling is successful.



Thermostat explained

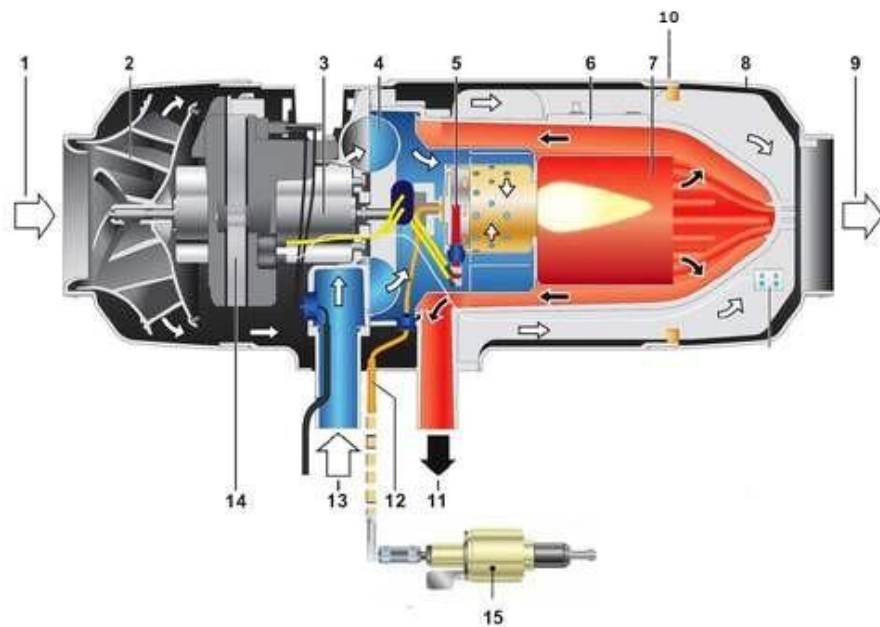
The thermostat's temperature sensor is located in the diesel heater's control panel / display. The control panel should therefore be placed about 100-140cm above the floor for as accurate sensing as possible. Avoid placing the control panel under windows or other locations where incorrect temperature reading may occur.

The thermostat adjusts the power of the diesel heater and only the power of the diesel heater, the thermostat will neither start nor turn off the diesel heater. The thermostat can operate between the minimum and maximum power of the diesel heater 1 - 10, this means that a small and well-insulated space will have difficulty maintaining a low temperature even during thermostat operation because the minimum operating power of 1 still applies.



Tempgivare

Cut-through view



1. Cold-air intake
2. Air turbine
3. Fan motor
4. Oxygen turbine
5. Glow plug
6. Heat exchanger
7. Combustion chamber
8. Outer casing
9. Hot-air exhaust
10. Heat exchanger temperature sensor
11. Exhaust outlet
12. Fuel intake
13. Oxygen intake
14. Motherboard
15. Fuel pump

Maintenance

- Start and run the diesel heater at least **once a quarter**, run the diesel heater at full power for at least 15 minutes
- Clean and blow the diesel heater unit inside from dust and dirt that has built up over time - **1 year interval**
- Replacing the fuel filter - **1 year interval**
- Check the condition of the fuel hose – **1 year interval**
- Clean the intake filter – **1 year interval**

Long-term storage

When the diesel heater is put away for the season or for any other reason is not to be used for more than 4 months, storage agent must **be added** to the fuel and the diesel heater must then be run until the storage agent reaches the combustion chamber.

Store the diesel heater in a dry and preferably warm room to prevent regular frost formation on and in the electronics.

Check the fuel tank before the season begins. If the tank stored fuel a long time (for example, from last season), it may be necessary to drain the fuel. In this case, fill the tank with gasoline or kerosene and fill it with fresh diesel fuel. This procedure is for removing deposits formed in the fuel during long-term storage. Failure to follow this procedure can lead to failure of the fuel pump and increased soot formation in the combustion chamber.

Error codes

Too low voltage / Low voltage	E-01	Increase the voltage by using a larger battery or coarser cables (at least 10 volts)
Too high voltage / High volt number	E-02	Reduce tension. The power source has a voltage higher than 30 volts
Missing glow plugs	E-03	Use a multimeter to see if current can pass through the glow plug. Disconnect the glow plug connector and measure on the cables using either the buzzer or Ohm function.
Faulty fuel pump	E-04	Check that the fuel pump connector is properly inserted
Overheating	E-05	Check that nothing is blocking the airflow at the front and rear of the diesel heater. Allow the unit to cool down and start again, if the problem persists, the cause may be a faulty temperature sensor
Faulty fan motor	E-06	Check that the fan can spin freely without resistance. Also check that the magnetic sensors on the inside of the fan are in place
Gaps in display connector	E-07	Check for gaps in the triangular display connector
The flame has gone out	E-08	Check that the oxygen intake and exhaust gases flow freely. Also check that the oxygen intake does not suck in its own exhaust gases
Sensor failure	E09	Check that the contact to the unit's temperature sensor is pressed correctly.
Failed ignition	E-10	Check for leaks on the fuel line, air in the line and the fuel level in the tank.
thermostat malfunctions	E-11	Temperature sensor for thermostat malfunctions
Motherboard overheated	E-12	The motherboard of the diesel heater assembly has exceeded 100 degrees Celsius

If the display does not light up, the reason may be that the plus and minus terminals are set incorrectly, that the fuse has burned, that all contacts are not inserted correctly or that the display is broken.

Technical specifications

airdrome 2kw

Max power	2000W
Fuel	Diesel
tension	12v
Power range	700-2000w
Fuel consumption	0.08 - 0. 23 Liters / hour
Power consumption	7 – 38W
Weight	2.55kgs

Airdrome 5kw

Max power	5000w
Fuel	Diesel
tension	12v
Power range	1000 - 5000w
Fuel consumption	0.12 – 0.54 Liters/hour
Power consumption	9 - 42W
Weight	3.65kgs

Airdrome 8kw

Max power	8000w
Fuel	Diesel
tension	12v
Power range	2000 - 8000w
Fuel consumption	0. 23 – 0. 86 Liters / hour
Power consumption	12 - 48W
Weight	3.65kgs

Warranty terms

The warranty does not apply to defects due to:

- improper installation, which is not in accordance with the included instructions.
- Force majeure: lightning, fire, flood, voltage fluctuations, accident;
- repair or adjustment, if not carried out by dealers,
- independent repair of heaters or the use of spare parts not approved by original manufacturers;
- use of the wrong voltage;
- Malfunction of the heater due to contamination of the combustion chamber, fuel line or air intake.

Wear parts: (filters, gaskets, glow plug screens and fuses are not covered by the guarantor).