

EN

ORIGINAL INSTRUCTIONS
OIL HEATER



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Notes regarding the instructions


Symbols

 **Warning of electrical voltage**
 This symbol indicates dangers to the life and health of persons due to electrical voltage.

 **Warning of flammable substances**
 This symbol indicates dangers to the life and health of persons due to flammable substances.

 **Warning of hot surface**
 This symbol indicates dangers to the life and health of persons due to hot surface.

 **Warning**
 This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.

 **Caution**
 This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Note
 This signal word indicates important information (e.g. material damage), but does not indicate hazards.



Info
 Information marked with this symbol helps you to carry out your tasks quickly and safely.



Follow the manual
 Information marked with this symbol indicates that the instructions must be observed.



Wear hearing protection
 Information marked with this symbol indicates that you should wear hearing protection.

You can download the current version of the instructions and the EU declaration of conformity via the following link:



IDS 20



<https://hub.trotec.com/?id=43996>

IDS 30



<https://hub.trotec.com/?id=43997>

Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.



Warning

Read all safety warnings and all instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

This device must not be used by children and persons under 16 years of age.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children under 16 years.



Warning

Do not use the device in rooms if persons are present who cannot leave the room independently and who are not under constant supervision.

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in aggressive atmosphere.
- Only put up the device in an upright, stable position on firm ground.
- Let the device dry out after a wet clean. Do not operate it when wet.
- Do not use the device with wet or damp hands.
- Do not expose the device to directly squirting water.
- Never insert any objects or limbs into the device.
- Do not cover the device during operation.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Attention: In Germany, the Federal Emission Protection Directive applies. Do not operate the device for more than 3 months at the same place. Prior to planning the flue gas system, gather information about the national legislation and contact a responsible specialist.
- Do not sit on the device.
- This appliance is not a toy. Keep away from children and animals. Do not leave the device unattended during operation.
- Check accessories and connection parts for possible damage prior to every use of the device. Do not use any defective devices or device parts.
- Ensure that all electric cables outside of the device are protected from damage (e.g. caused by animals). Never use the device if electric cables or the power connection are damaged!
- The mains connection must correspond to the specifications in the Technical annex.
- Insert the mains plug into a properly fused mains socket.
- Observe the device's power input, cable length and intended use when selecting extensions to the power cable. Completely unroll extension cables. Avoid electrical overload.
- Before carrying out maintenance, care or repair work on the device, remove the mains plug from the mains socket. Hold onto the mains plug while doing so.
- Switch the device off and disconnect the power cable from the mains socket when the device is not in use.
- Do not under any circumstances use the device if you detect damages on the mains plug or power cable. If the power cable is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. Defective power cables pose a serious health risk!
- When positioning the device, observe the minimum distances from walls and other objects as well as the storage and operating conditions specified in the Technical annex.
- Keep a safety distance of at least 1 m between the device's air outlet and all combustible materials such as textiles, curtains, beds and sofas.
- Make sure that the air inlet and outlet are not obstructed.
- Make sure that the suction side is kept free of dirt and loose objects.
- Do not place the device on combustible ground.
- Only transport the device in an upright position.
- Only use original spare parts, for otherwise safe and functional operation cannot be ensured.
- Do not use the heating device together with a programming device, a timer, a separate remote control system or any other device that automatically switches the heating device on, as there is a risk of fire if the heating device is covered or incorrectly positioned.

Intended use

The device was developed for the purpose of generating hot air and may only be used in roofed over outdoor areas or in well-ventilated interior spaces whilst adhering to the technical data.

The device is suited for heating large rooms such as tents, warehouses, workshops, construction sites, greenhouses or agricultural halls.

It is intended to be used without frequent site changes.

The device may only be used in rooms with sufficient fresh air supply and exhaust discharge.

The device must only be operated with EL (ultra-light) fuel oil and diesel, however not with petrol, heavy fuel oil etc.

Foreseeable misuse

- Do not place any objects, e.g. clothing, on the device.
- Do not use this device in the vicinity of fuel, solvents, varnishes or other easily inflammable vapours or in rooms where these substances are stored.
- Do not use the device out of doors.
- The device must not be positioned or operated in areas with a high risk of fires or in potentially explosive atmospheres.
- Do not use the device out of doors, unless under a roof.
- The device must not be operated in rooms with an insufficient combustion air supply.
- Do not make any unauthorised modifications, alterations or structural changes to the device.

Personnel qualifications

People who use this device must:

- be aware of the dangers resulting from heat, fire hazard and insufficient ventilation when working with oil heaters.
- be aware of the dangers that occur when handling fuels such as EL fuel oil or diesel.
- have read and understood the instructions, especially the Safety chapter.

Safety devices

The device is equipped with an electronic flame and maximum temperature monitoring system working with a photo cell and a safety thermostat.

The electronic control unit regulates the start-up, stopping and safety shutdown times in case of malfunctions.

Personal protective equipment



Wear hearing protection

Wear appropriate hearing protection when working with the device.

Residual risks



Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



Warning of electrical voltage

Before any work on the device, remove the mains plug from the mains socket!
Do not touch the mains plug with wet or damp hands. Hold onto the mains plug while pulling the power cable out of the mains socket.



Warning of flammable substances

Handling fuels entails a risk of fire.
Take sufficient precautions when handling fuels such as fuel oil, kerosene or diesel.
Do not spill any diesel, kerosene or fuel oil! Do not inhale the vapours nor swallow any fuel! Avoid skin contact!



Warning of hot surface

Parts of the device, especially at the air outlet, become very hot during operation. There is a danger of burning and fire. Do not touch the device during operation!
During operation observe a safety distance of at least 3 m to the device front! Observe the minimum distance from walls or other objects according to the technical data!



Warning of hot surface

Parts of this appliance can become very hot and cause burns. Particular attention is to be paid when there are children or vulnerable persons present!



Warning of hot surface

Improper handling entails a risk of burning. Only use the device as intended!



Warning

Improper handling entails a risk of burning and electric shock.
Only use the device as intended!



Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way!
Observe the personnel qualifications!



Warning

The device is not a toy and does not belong in the hands of children.



Warning

Risk of suffocation!
Do not leave the packaging lying around. Children may use it as a dangerous toy.



Warning

Improper installation entails a risk of fire.
Do not place the device on combustible ground.
Do not place the device on high-pile carpets.



Warning

The device must not be covered, there is an imminent fire hazard!

Behaviour in the event of an emergency

1. In an emergency, disconnect the device from the mains feed-in: Switch the device off and disconnect it from the mains.
2. Remove persons from the danger area.
3. Do not reconnect a defective device to the mains.

Information about the device

Device description

The indirectly fired oil heaters serve to heat room air in order to heat large rooms more quickly.

The devices only run on EL fuel oil, kerosene or diesel. They must not be used with petrol, heavy fuel oil etc.

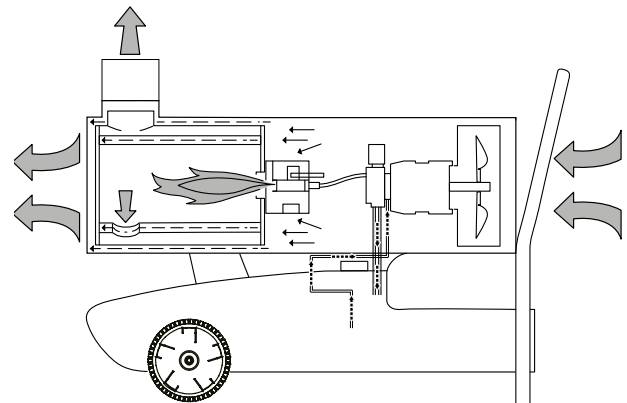
The devices are oil heaters with indirect combustion to be installed in roofed outdoor areas or in rooms with a sufficient fresh air supply. The devices are equipped with an exhaust gas connection for the discharge of exhaust gases via the chimney.

The devices are further equipped with a fuel filter and a fuel pump.

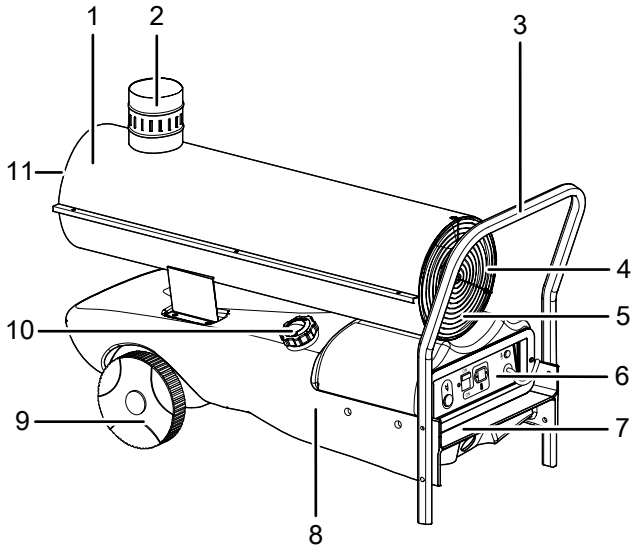
THIS HEATER IS FOR PROFESSIONAL USE. IT HAS BEEN CAREFULLY DESIGNED FOR MOBILE AND TEMPORARY PROFESSIONAL APPLICATIONS. IT HAS NOT BEEN DESIGNED FOR DOMESTIC USE NOR FOR COMFORT HEATING AND SHOULD NEVER BE USED TO HEAT CLOSED ROOMS WITHOUT ADEQUATE VENTILATION.

Functional principle

The device generates warmth by conveying the sucked-in, cold air past the enlarged area of the combustion chamber, the heat exchanger. The air to be heated is completely isolated from the combustion chamber, where the fuel is burned. The combustion products are discharged into the open air through a flue pipe. The sucked-in air is heated and fed back to the environment via the air outlet.



Device depiction



No.	Designation
1	Combustion chamber housing
2	Flue pipe connection
3	Transport handle
4	Air inlet with protective grid
5	Fan and motor
6	Control panel
7	Frame
8	Tank
9	Wheel
10	Fuel tank cap
11	Air outlet for hot air

Transport and storage

Note

If you store or transport the device improperly, the device may be damaged.
 Note the information regarding transport and storage of the device.

Transport

To make the device easier to transport, it is fitted with a transport handle and two wheels.

Before transporting the device, observe the following:

- Switch the device off.
- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Do not use the power cable to drag the device.
- Allow the device to cool down sufficiently.
- Before transporting or moving the device, make sure that the tank cap is tightly closed.

While transporting the device, observe the following:

- Slightly lift the device by the transport handle until the rear support no longer touches the ground.
- Wheel the device to the desired position.

Storage

Before storing the device, proceed as follows:

- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Allow the device to cool down sufficiently.

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- in an upright position where it is protected from dust and direct sunlight
- with a cover to protect it from invasive dust, if necessary

Assembly and start-up

Scope of delivery

- 1 x Oil heater
- 1 x Transport handle
- 2 x Wheel
- 1 x Installation material
- 1 x Manual

Unpacking the device

1. Open the cardboard box and take the device out.
2. Completely remove the packaging.
3. Fully unwind the power cable. Make sure that the power cable is not damaged and that you do not damage it during unwinding.

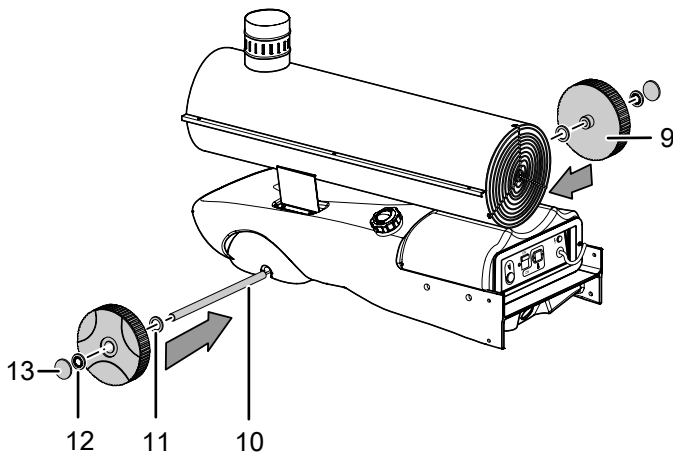
Assembly

Upon delivery the device is already partially preassembled. The wheels, axle and transport handle still need to be mounted.

Assembling the wheels

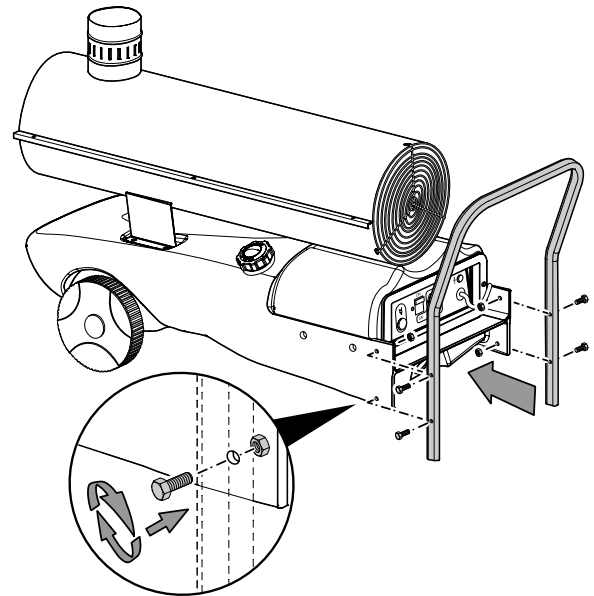
Prior to initial start-up, the wheels and the axle must be mounted to the device. To do so, please proceed as follows:

1. Mount the axle (10) on the device.
2. Slide the washers (11) onto the axle.
3. Mount the wheels (9) on the axle.
4. Attach the locking rings (12) to the axle.
5. Fasten the wheel caps (13) to the wheels.



Mounting the transport handle

1. Connect the transport handle (3) to the rear of the device.
2. Make sure that the holes in the transport handle are aligned with the holes in the frame (7).



3. Secure the transport handle to the frame using the screws and nuts.

Assembly of the exhaust line



Warning

Note that this device must not be put into operation unless there is an exhaust line mounted at the flue pipe connection!

Assembly of a closed exhaust line



Warning

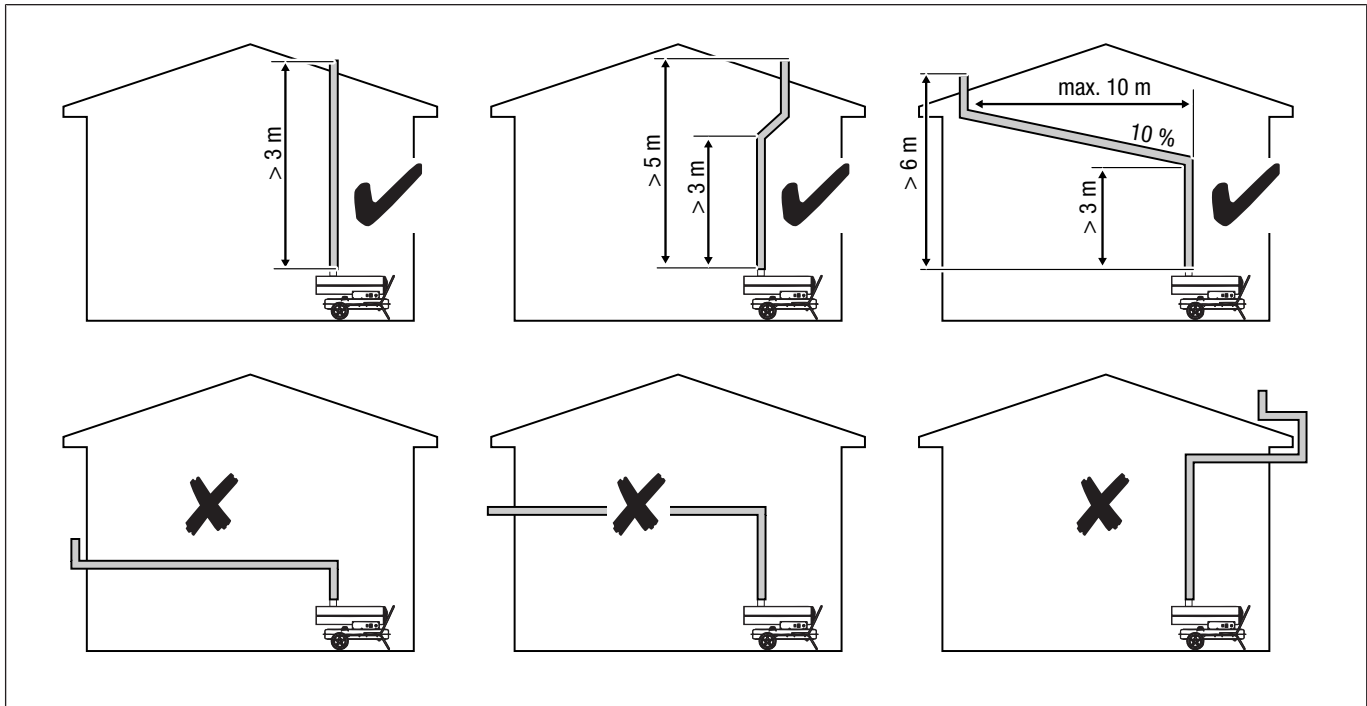
Make sure that in every operating and weather condition a vacuum of > 0.1 mbar is created in the exhaust line.

This vacuum guarantees a safe discharge of exhaust gases from the room. The exhaust line must be installed upward. There must be no bends or elbows in the first 3 metres of the exhaust line!

If the device is used in closed rooms and the combustion gases are discharged via a chimney, a fresh air supply of approx. $80 \text{ m}^3/\text{h}$ (air inlet opening approx. 0.5 m^2) must be ensured.

- Prior to planning the flue gas system, gather information about the national legislation and contact a responsible specialist (cf. DIN 18160 in Germany).
- Ensure an unimpeded and sufficient combustion air supply (e.g. by means of ventilation openings in doors, ceilings, windows, walls or via interconnected airways).
- Have the exhaust emission of the burner checked at regular intervals.

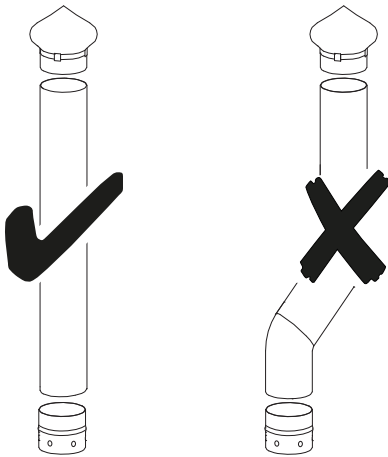
Below are some examples of good and bad exhaust gas discharge:



Assembly of a flue pipe (optional)

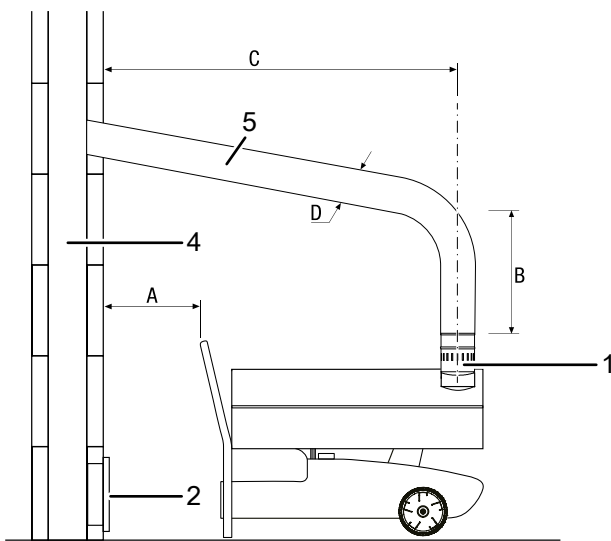
When the flue pipe is mounted to the flue pipe connection for the discharge of the exhaust gas, the device must only be operated in outdoor areas. Please observe the following:

- The flue pipe must not exceed a length of 1 m.
- Bends and elbows in the flue pipe are prohibited.
- If the device is used out of doors, a rain cap must be mounted to the end to prevent the penetration of rain water and dirt.
- The flue pipe must be designed in a way to prevent counter-pressure.
- To ensure failure-free operation the flue pipe must be installed upward.



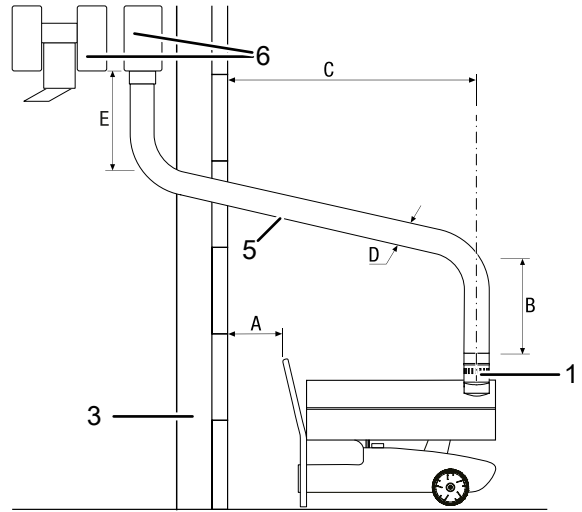
Chimney duct

The following schematic representation should be considered when planning a chimney duct:



Wall duct

The following schematic representation should be considered when planning a wall duct:



No.	Designation	No.	Designation
A	min. 1 m	1	flue pipe connection
B	min. 1 m	2	cleaning opening with explosion protection flap
C	as short as possible	3	outer wall
D	≥ Ø 120 mm / 150 mm	4	chimney – inside min. 20 x 20 cm
E	min. 1 m	5	wall duct with elbow min. 5°
		6	draught booster H-shaped

Positioning

A number of spatial and technical conditions have to be considered for the selection of the device's installation site. Non-observance may impair the proper functioning of the device or the accessories or can entail risks of personal injury and property damage.

The following is to be observed for positioning:

- Do not operate the device for more than 3 months at the same place. Prior to planning the flue gas system, gather information about the national legislation and contact a responsible specialist.
- The device may only be operated on roofed over surfaces.
- The device is to be set up in a stable position on incombustible ground.
- The device must be set up in close proximity to a chimney, an outer wall or on an open, ventilated surface.
- The device must be connected to a properly secured mains power socket.
- The room where the device is positioned must be sufficiently ventilated.

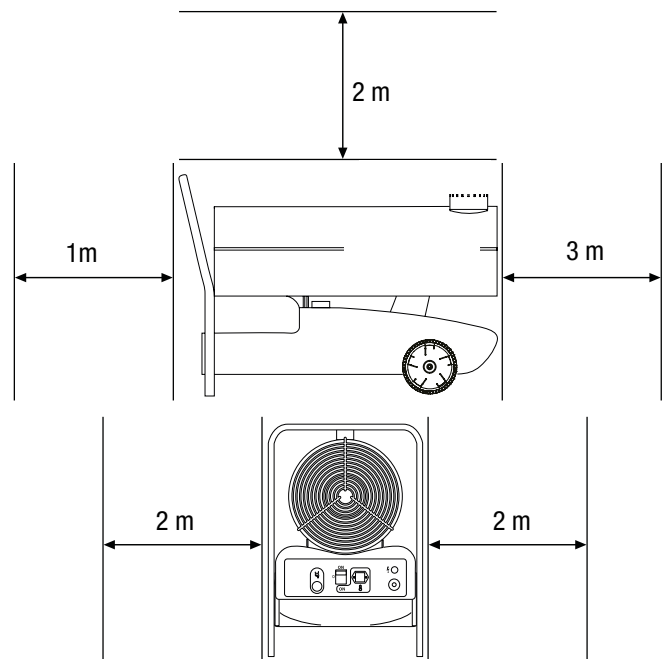
Ensure a sufficient fresh air supply, especially when there are people or animals in the same room with the device!

- The minimum distance between walls or other objects and the air outlet opening of the device must be at least 3 m (see figure).

The minimum distance between walls or other objects and the air inlet opening of the device must be at least 1 m (see figure).

There must be no walls or large objects near the device.

- The inlet and outlet openings must not be covered.
- There must be a sufficient number of fire extinguishers available.
- Avoid low or excess pressure in the installation space, since this could lead to combustion-related difficulties.



Start-up

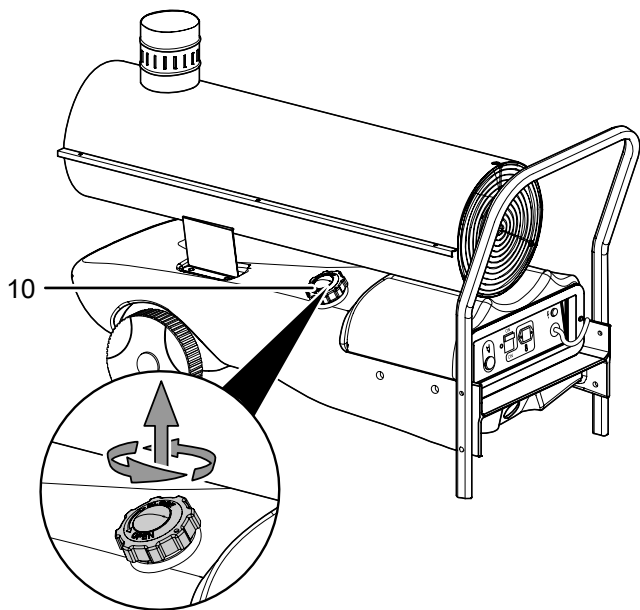
- Check the scope of delivery of your device for completeness. If an accessory part is missing, please contact the Trotec customer service or the specialist dealer where you purchased the device.
- Check the device and its connection parts for potential damage.
- Observe the conditions described in the chapter Positioning.
- Fill the tank with EL fuel oil, kerosene or diesel as described in chapter Assembly
- Check the device for its proper condition prior to start-up and at regular intervals during application.
- Check whether the characteristics of the power grid conform to those on the nameplate.
- Each time before you plug the mains plug into the mains socket and switch on the device, make sure that the fan is moving freely.
- Connect the power cable to a properly secured socket. On construction sites, there must be a residual current device (RCD) upstream of the socket in accordance with national regulations (in Germany: VDE 0100/0105).

The device is now ready for operation.

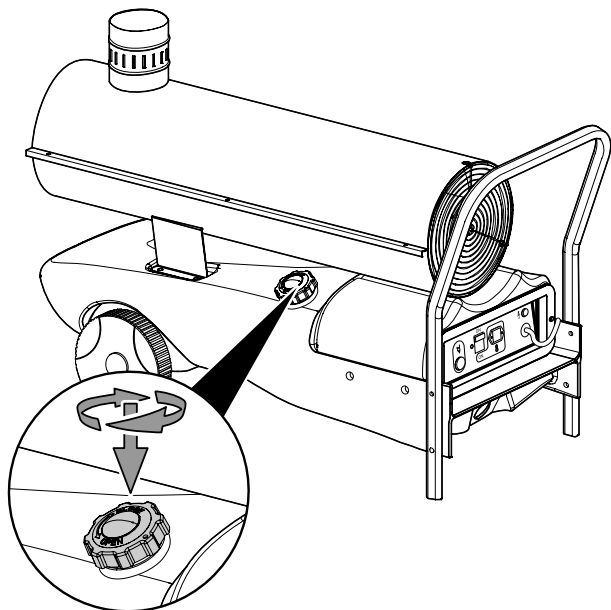
Filling the tank

The fuel tank cap is located at the side of the device.

- ✓ Before attempting to fill the tank, wait until the device has cooled down completely.
 - ✓ Only use fuel suitable for the device (see technical data).
1. Position the device on firm, level and incombustible ground.
 2. Unscrew the fuel tank cap (10) by turning it in counter-clockwise direction.



3. Fill the tank.
4. Screw the fuel tank cap (10) back onto the tank by turning it in clockwise direction. Observe the recesses at the tank opening and the protrusions at the fuel tank cap. They must be aligned when attaching the fuel tank cap. Make sure that the fuel tank cap is firmly attached to avoid leakage.



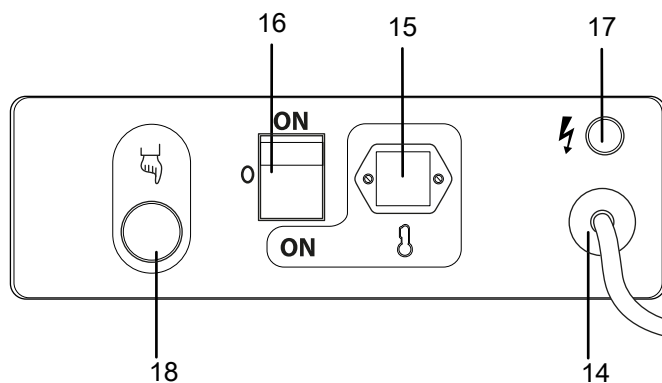
Operation

The device may only be used by accordingly instructed persons.

Switching the device on

The device has two operating modes:

- Manual operation
- Automatic operation with external thermostat (article no. 6.100.007.015)



No.	Designation
14	Power supply cable
15	Thermostat socket
16	Selector switch (continuous operation/thermostat operation)
17	Operating light
18	Reset button with indicator light

Manual operation

For continuous heat generation, here, the device operates independently of a control unit.

1. Switch the device on by setting the position of the selector switch (16) to **ON** (continuous operation).

Automatic operation

Automatic operation of the device is only an option with a connected controller (optional), e.g. a thermostat. The thermostat is connected to the thermostat socket (15).

1. Switch the device on by setting the position of the selector switch (16) to **ON** (thermostat).

⇒ To confirm the completion of the start-up process, the electronic control unit causes the reset button (18) to briefly flash in red.

Safety devices

The device is equipped with an electronic flame and maximum temperature monitoring system working with a photo cell and a safety thermostat.

The electronic control unit regulates the start-up, stopping and safety shutdown times in case of malfunctions. The control unit comes with a reset button; its colour (operating display) depends on the operating mode:

Indication	Meaning
Off	Standby mode
Illuminated in green	Normal operation mode
Illuminated in red	Safety shutdown of the device
Flashing in orange	Operation interrupted due to great fluctuations in the power supply ($T < 175 \text{ V}$ or $T > 265 \text{ V}$) Automatic resumption when the voltage stabilizes between 190 V and 250 V.

When the device has triggered a safety shutdown:

- Press the reset button (18) for approx. 3 seconds to resume operation.



Warning

Risk of injury from deflagration!
Unburned fuel oil can accumulate in the combustion chamber and might ignite during the subsequent restart.
Never carry out more than two consecutive restarts.

If the safety shutdown persists:

1. Determine and eliminate the cause of the fault before restarting the device (see chapter Errors and faults).
2. Press the reset button (18) for at least 5 seconds.

This activates the self-diagnosis programme. Upon completion, the colour of the reset button (18) changes to indicate the respectively diagnosed cause of the fault:

Indication	Meaning
Flashing in orange	Improperly dimensioned flame during start-up
Flashes red	Flame failure during start-up
Flashing in red/green	Flame failure during operation
Illuminated in orange	Internal error of an electronic controller

Restarting the device after a malfunction

During initial start-up and after the fuel oil circuit has been drained completely, the fuel oil supply to the nozzle may be insufficient. In this case, the flame monitoring system will respond and the device will be blocked.

1. Wait for approx. 1 minute.
2. Press the reset button (18) for approx. 5 seconds.
3. Switch the device on.

If the device still does not start:

- Make sure that there is fuel oil left in the tank.
- Press the reset button (18).

To detect further causes of error, see chapter Errors and faults.

Shutdown



Warning of electrical voltage

Do not touch the mains plug with wet or damp hands.

Note

Damage to the device due to overheating!
Never switch off the device by pulling the mains plug.
This may lead to overheating!
Switch off the device properly. Only pull the mains plug once the fan motor has stopped completely.

1. Switch off the device by setting the selector switch to position **0**.
2. If you use a thermostat, switch off the device using the settings of the controller (e.g. by setting a lower temperature at the thermostat).
⇒ The flame goes out and the fan continues to run for approx. 90 seconds in order to cool down the burner.
3. Wait until the automatic after-cooling is completed.
4. Secure the device against inadvertent switch-on by pulling the mains plug.

Available accessories

Accessories	IDS 20 Article number	IDS 30 Article number
Adapter 300 mm for IDS 30	-	Ø 300 mm 6.100.006.163
Thermostat IDS series with 10 m cable	6.100.007.015	6.100.007.015
Filling level meter IDS series	6.100.006.160	6.100.006.160
Tank filter for IDS series	6.100.006.161	6.100.006.161
Exhaust gas pipe rigid 150 mm / 1 m	-	6.100.006.210
Exhaust gas pipe arc 90° 150 mm	-	6.100.006.216
Exhaust gas pipe rain cover 150 mm	-	6.100.006.222
Exhaust gas pipe rigid 120 mm / 1 m	6.100.006.212	-
Exhaust gas pipe arc 90° 120 mm	6.100.006.218	-
Exhaust gas pipe rain cover 120 mm	6.100.006.224	-
SP-C hose 305 mm, 7.6 m	-	6.100.001.265
Universal tension belt for SP series	-	6.100.001.995



Warning

Only use accessories and additional equipment specified in the instructions. Using insertion tools or accessories other than those specified in the instructions may cause a risk of injury.

Errors and faults



Warning of electrical voltage

Tasks which require the device to be opened must only be carried out by authorised specialist companies or by Trotec.



Warning

Risk of injury due to improper repair!
Never try to make any modifications or repairs on the device.
Unauthorised modifications can lead to serious injuries or death.
Have a certified specialist workshop perform the repair work.

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

The device does not start:

- Check the power connection.
- Check the power cable and mains plug for damages.
- Check the on-site fusing.
- Check the indicator light of the reset button (18; meaning see chapter Operation).

Smoke and/or sparks are emitted during first use:

- This is not a fault. These phenomena disappear after a brief runtime.

Noise emission during ignition or cooling:

- This is not a fault. The metal parts of the device expand when heated and generate noise.

Sparks and/or flame may be issued from the device during ignition:

- This is not a fault. Air might have accumulated in the lines. Keep a safety distance to the device!

The flame in the combustion chamber does not ignite:

- Check the filling level of the tank. Refill fuel if the tank is empty (see chapter Maintenance).
- Check the fuel filter and the fuel pump for dirt. If it is dirty, please contact the customer service.
- Check the fuel for contaminations, e.g. dirt or water. If required, drain the fuel completely and fill in new fuel (see chapter Maintenance).
- Safety shutdown: if the flame dies during operation, the electronics and the oil pump will be switched off. Investigate the cause on the basis of the following criteria:
 - **For qualified personnel only!**
Check the ignition: The distance between the two ignition electrodes should be 2 to 3 mm.
- Check the indicator light of the reset button (18; meaning see chapter Operation).

The flame goes out during combustion:

- Make sure the air supply is unobstructed. If required, clean the air intake opening.
- Check the filling level of the tank. Refill with fuel if the tank is empty (see chapter Operation).
- Check the fuel filter and the fuel pump for dirt. If it is dirty, please contact the customer service.
- Check the fuel for contaminations and replace it if required.
- Power failure: In the event of a power failure the ignition is extinguished, the device switches off immediately. After a power failure the device will not restart automatically, it has to be started via the on/off switch.
- Check the indicator light of the reset button (18; meaning see chapter Operation).

There is a fuel leak:

- Check whether too much fuel was filled in. Drain the fuel if necessary, see chapter Draining the tank.
- Check the drain screw for tight fit and retighten it if necessary.
- Check the sealing at the drain screw and replace it if damaged.
- Check the fuel pump for leaks. If there are doubts about the proper condition of the fuel pump, please contact the customer service.

The device emits smoke or dust:

- Check the mains voltage.
- Check the fuel for contaminations and replace it if required.
- Check the tank for contaminations and drain it if required (see chapter Maintenance). Refill with clean fuel.

The flame emerges from the air outlet:

- Check the mains voltage.
- Check the fuel for contaminations and replace it if required.
- Check the tank for contaminations and drain it if required (see chapter Maintenance). Refill with clean fuel.

Note

Wait for at least 3 minutes after maintenance and repair work. Only then switch the device back on.

The device still does not operate correctly after these checks:

Please contact the customer service. If necessary, bring the device to an authorised specialist electrical company or to Trotec for repair.

Malfunction	Meaning	Remedy
Fan does not start and flame does not ignite; operating display is switched off	Controller set incorrectly	Check whether the controller is set correctly (e.g. the temperature set at the thermostat must be higher than the room temperature).
	Controller faulty	Have the controller replaced by the customer service.
Fan does not start or switches off during start-up/operation; operating display flashes in orange	No power supply	Check the characteristics of the electrical system (230 V, 1 ~, 50 Hz). Check the functionality and position of the selector switch. Check the fuse for soundness.
	Voltage < 175 V	Check the supply voltage. The device will restart automatically when the voltage value exceeds 175 V.
	Voltage > 265 V	Check the supply voltage. The device will restart automatically when the voltage value falls below 250 V.
Fan switches off during start-up/operation; operating display illuminated in red, self-diagnosis indication flashes in orange	Flame present prior to ignition of the transformer	Instruct the customer service to have the device cleaned and to have fuel oil residues removed from the combustion chamber.
	Photo cell faulty	Have the photo cell exchanged by the customer service.
Fan switches off during start-up/operation; operating display permanently illuminated in red, self-diagnosis indication flashes in red or red/green	Motor winding interrupted or blown	Have the motor replaced by the customer service.
	Motor bearing blocked	Have the motor bearing replaced by the customer service.
	Motor capacitor blown	Have the motor capacitor replaced by the customer service.
	No ignition	Check the connections of the ignition cables at the electrodes and the transformer. Check the position and the distance of the electrodes. Check whether the electrodes are clean. Have the transformer replaced by the customer service.
	Flame monitoring system faulty	Have the flame monitoring system replaced by the customer service.
	Photo cell faulty	Have the photo cell cleaned or replaced by the customer service.
	Burner is supplied with no or insufficient fuel oil	Charge the customer service with the following tasks: <ul style="list-style-type: none"> to have the coupling between the pump and the motor checked for soundness to have the fuel oil circuit checked for intruded air and to have the lines and filter seal checked for tightness to have the nozzle cleaned and replaced
	Magnet valve faulty	Charge the customer service with the following tasks: <ul style="list-style-type: none"> to have the electrical connections checked. to have the safety thermostat L1 checked. to have the magnet valve cleaned or replaced

Fan switches off during start-up/operation; operating display permanently illuminated in red, self-diagnosis indication permanently illuminated in orange	Internal error of the electronic control unit	Charge the customer service with the following tasks: <ul style="list-style-type: none"> to have the control unit reset; try at least twice. If the problem persists, have the control unit replaced.
Fan starts, but the flame generates smoke; operating display permanently illuminated in green	Insufficient combustion air supply	<ul style="list-style-type: none"> Remove all obstacles and obstructions from the inlet and/or outlet openings. Have the position of the adjustment ring for the regulation of the air supply checked by the customer service. Have the supporting disc of the burner cleaned by the customer service
	Excessive combustion air supply	Have the position of the adjustment ring for the regulation of the air supply checked by the customer service
	Used fuel oil contaminated or contains water	Replace used fuel oil with clean fuel oil. Clean the fuel oil filter.
	Air inside the fuel oil circuit	Have the lines and the fuel oil filter checked for tightness by the customer service.
	Insufficient fuel oil quantity at the burner	Charge the customer service with the following tasks: <ul style="list-style-type: none"> to have the pump pressure checked. to have the nozzle cleaned or replaced
	Excessive amount of fuel oil at the burner	Charge the customer service with the following tasks: <ul style="list-style-type: none"> to have the pump pressure checked. to have the nozzle replaced.
Device switches off; operating display permanently illuminated in green	Sealing of the magnet valve faulty	Have the magnet valve replaced by the customer service.

Maintenance

Maintenance intervals

Maintenance and care interval	before every start-up	as needed	at least every 2 weeks	at least every 4 weeks	at least every 6 months	at least annually
Check air inlets and outlets for dirt and foreign objects and clean if necessary	X					
Check air inlet grid(s) for dirt and foreign objects and clean if necessary	X		X			
Clean the exterior		X				X
Visually check the inside of the device for dirt		X		X		
Check for damage	X					
Check attachment screws		X				X
Test run						X

Maintenance and care log

Device type:

Device number:

Maintenance and care interval	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Check air inlets and outlets for dirt and foreign objects and clean if necessary																
Check air inlet grid(s) for dirt and foreign objects and clean if necessary																
Clean the exterior																
Visually check the inside of the device for dirt																
Check for damage																
Check attachment screws																
Test run																
Comments																

1. Date:	2. Date:	3. Date:	4. Date:
Signature:	Signature:	Signature:	Signature:
5. Date:	6. Date:	7. Date:	8. Date:
Signature:	Signature:	Signature:	Signature:
9. Date:	10. Date:	11. Date:	12. Date:
Signature:	Signature:	Signature:	Signature:
13. Date:	14. Date:	15. Date:	16. Date:
Signature:	Signature:	Signature:	Signature:

Activities required before starting maintenance



Warning of electrical voltage

Do not touch the mains plug with wet or damp hands.

- Switch the device off.
- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Allow the device to cool down completely.



Warning of electrical voltage

Tasks which require the device to be opened must only be carried out by authorised specialist companies or by Trotec.

Cleaning the housing

Clean the housing with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Protect electrical components from moisture. Do not use any aggressive cleaning agents such as cleaning sprays, solvents, alcohol-based or abrasive cleaners to dampen the cloth.

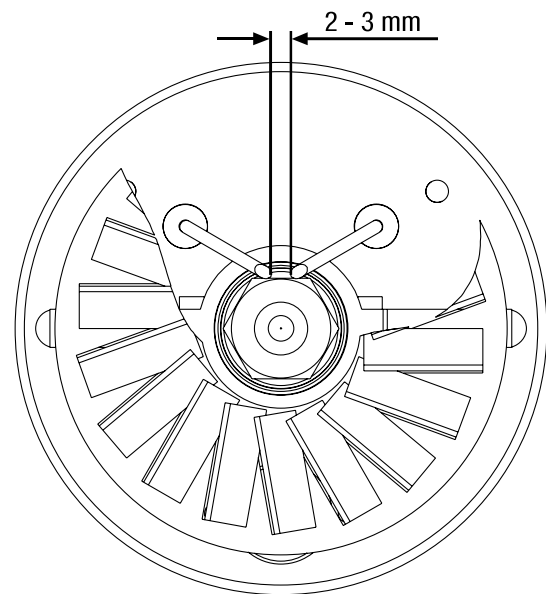
Wipe the housing dry after cleaning.

For a smooth operation of the device, the combustion chamber, the burner and the fan must be cleaned regularly.

1. Switch the device off as described in the Shutdown chapter.
2. Wait until the device has cooled down completely.

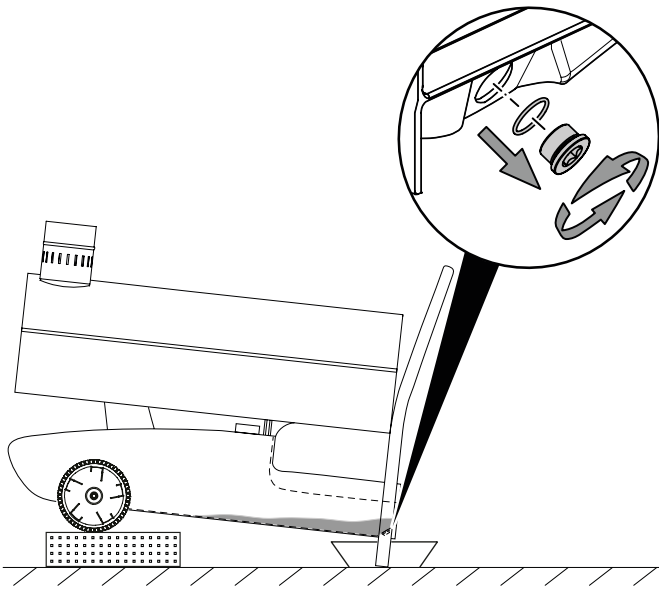
Cleaning after every 50 operating hours

1. Remove the fuel oil filter. Take out the filter insert and clean it with clean fuel oil.
2. Dismantle the upper part of the housing and clean the inner section and the fan blades with a cleaning fleece and, in case of heavy soiling, with a brass brush.
3. Check the condition of all cables and of the high-voltage plugs.
4. Dismantle the burner and clean its components with a brass brush.
5. Clean the electrodes. Check the distance of the electrodes and adjust if necessary (see figure).



6. Have the combustion chamber cleaned by the customer service.
7. Assemble the components in reverse order.

Draining the tank



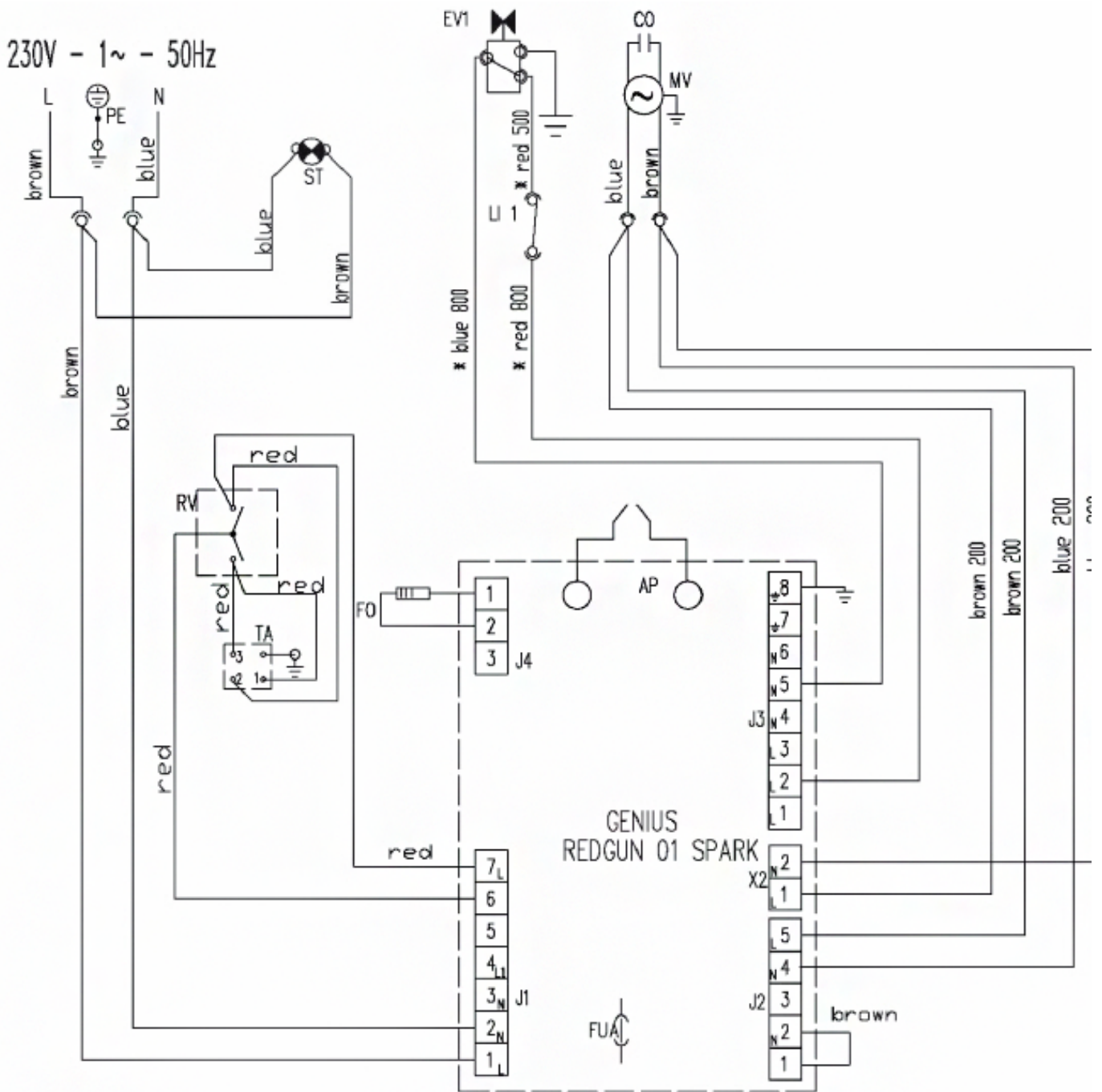
1. Provide for a suitable collection container.
2. Move the device to an elevated position.
3. As indicated in the figure use a wrench to open the screw at the bottom of the tank.
4. Drain the fuel into the collection container.
5. When no more fuel is discharged, seal the drain hole again.
 - ⇒ Ensure the tight fit of the screw and, if required, replace the seal, for otherwise fuel might leak out uncontrollably.
6. Dispose of the fuel according to national regulations.

Technical annex

Technical data

Parameter	Value	
Model	IDS 20	IDS 30
Permitted fuel	EL fuel oil, low-sulphur EL fuel oil, diesel or kerosene	EL fuel oil, low-sulphur EL fuel oil, diesel or kerosene
Combustion	indirect	indirect
Max. air flow rate	550 m ³ /h	1150 m ³ /h
Fan	axial fan	axial fan
Flue pipe connection Ø	120 mm	150 mm
Air transport hose connector Ø (optional)	-	300 mm
Nozzle	0.40--80°S (gal/h)	0.60--80°S (gal/h)
Max. nominal heat input	23.4 kW	34.1 kW
Max. nominal heat output	19.6 kW	32 kW
Temperature increase ΔT	95 °C	70 °C
Max. fuel consumption	2.23 l/h	3.25 l/h
Tank capacity	42 l	42 l
Input voltage	230 V / 50 Hz	230 V / 50 Hz
Current consumption	1.25 A	1.56 A
Power consumption	0.3 kW	0.37 kW
Cable length of connection plug	1.2 m	1.2 m
Overheating protection	yes	yes
Connection for external thermostat	yes	yes
Sound pressure level (distance 1 m)	70 dB(A)	75.3 dB (A)
Dimensions (length x width x height)	1050 x 400 x 520 mm	1175 x 400 x 605 mm
Minimum distance to walls or other objects		
top	1 m	1 m
rear	2 m	2 m
sides	2 m	2 m
front	3 m	3 m
Weight (with empty tank)	40 kg	48 kg

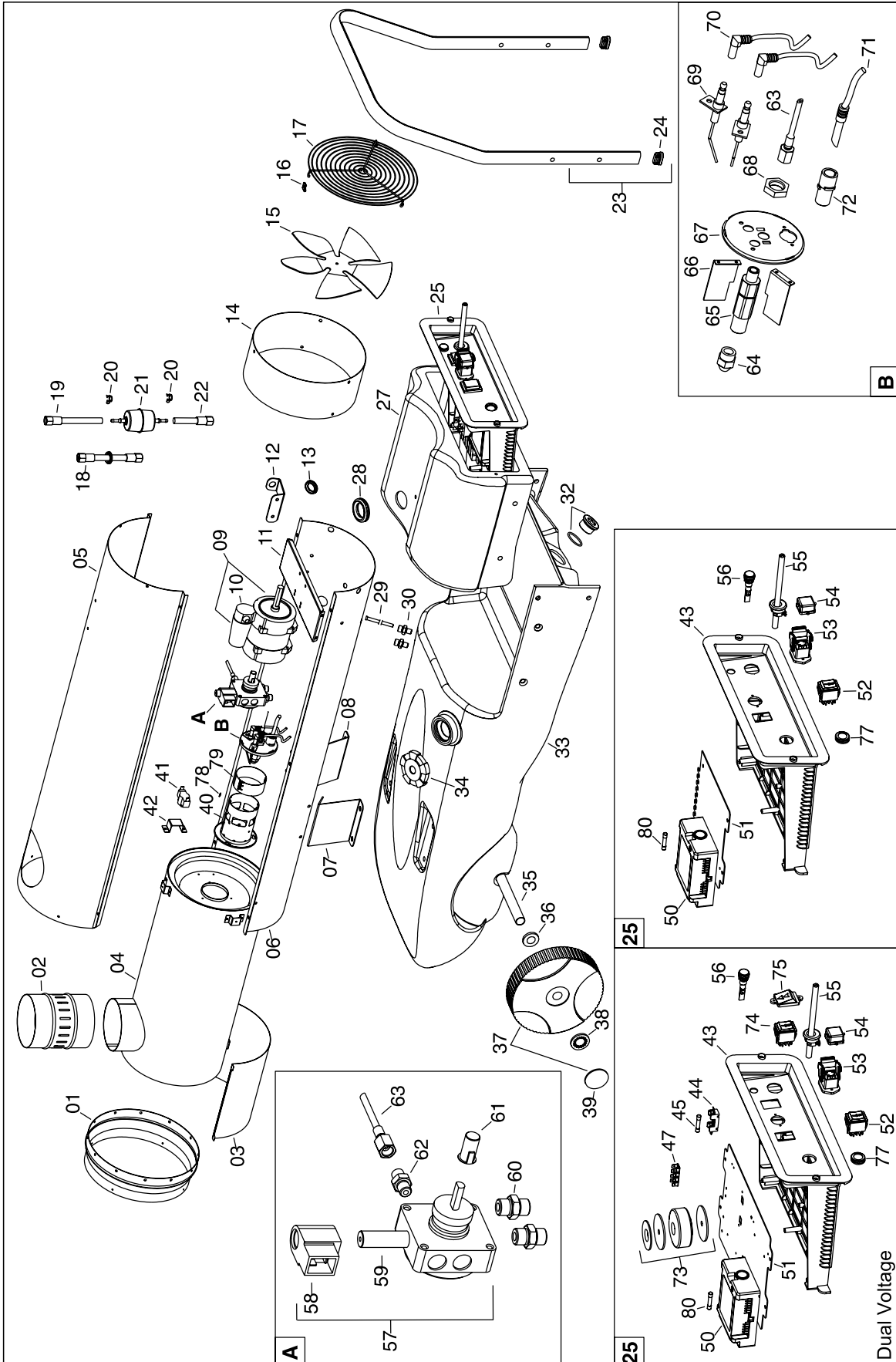
Wiring diagram IDS 20 / IDS 30



Overview of spare parts IDS 20

Note!

The position numbers of the spare parts differ from those describing the positions of the components mentioned in these instructions.



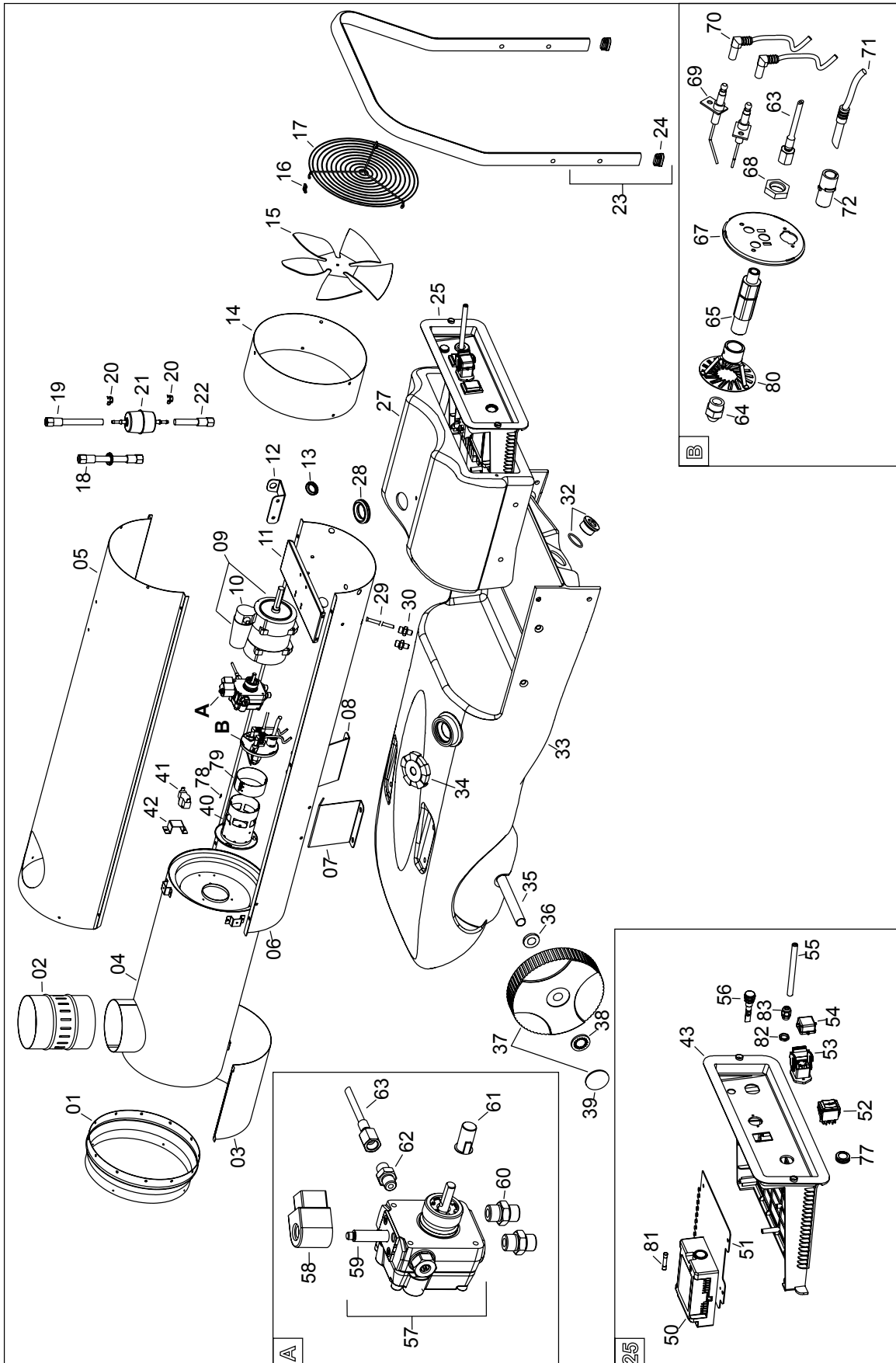
Spare parts list IDS 20

NO.	SPARE PART	NO.	SPARE PART	NO.	SPARE PART
1	Outlet cone	24	Pipe cap	55	Power cord
2	Chimney fitting	25	El. control box	56	Lamp
3	Insulating panel	27	Control box cover	57	Diesel pump
4	Combustion chamber	28	Cable protection	58	Solenoid coil
5	Upper body	29	Suction pipe	59	Solenoid valve body
6	Lower body	30	Brass fitting	60	Iron fitting
7	Chassis support bracket	32	Drain cap	61	Motor-pump coupling
8	Chassis support bracket	33	Fuel tank	62	Iron fitting
9	Motor	34	Tank cap	63	Micropipe
10	Capacitor	35	Wheel axle	64	Nozzle
12	Power cord support	36	Washer	65	Nozzle support
13	Cable protection	37	Wheel	66	Air flap
14	Air conveyer	38	Elastic washer	67	Burner support disc
15	Fan	39	Black wheel cover	68	Brass lock nut
16	Lock plate	40	Blast tube	69	Ignition electrode
17	Inlet grill	41	Safety thermostat	70	H.T. Cable connect.
18	Flex diesel pipe	42	Thermostat support bracket	71	Phototransistor
19	Flex diesel pipe	43	El. control box panel	72	Photoresistor support
20	Clip	50	Flame control box	77	Stop button protection
21	Filter	51	Support plate	78	Terminal board
22	Flex diesel pipe	52	Switch	79	Air conveyer
23	Handle	54	Thermostat plug cover	80	Fuse

Overview of spare parts IDS 30

Note!

The position numbers of the spare parts differ from those describing the positions of the components mentioned in these instructions.



Spare parts list IDS 30

NO.	SPARE PART	NO.	SPARE PART	NO.	SPARE PART
1	Outlet cone	28	Cable protection	Suntec	
2	Chimney fitting	29	Suction pipe	57	Diesel pump
3	Insulating panel	30	Brass fitting	58	Solenoid coil
4	Combustion chamber	32	Drain cap	59	Solenoid valve body
5	Upper body	33	Fuel tank		
6	Lower body	34	Tank cap	60	Iron fitting
7	Chassis support bracket	35	Wheel axle	61	Motor-pump coupling
8	Chassis support bracket	36	Washer	62	Iron fitting
9	Motor	37	Wheel	63	Micropipe
10	Capacitor	38	Elastic washer	64	Nozzle
11	Motor support bracket	39	Black wheel cover	65	Nozzle support
12	Power cord support	40	Blast tube	67	Burner support disc
13	Cable protection	41	Safety thermostat	68	Brass lock nut
14	Air conveyor	42	Thermostat support bracket	69	Ignition electrode
15	Fan	43	El. control box panel	70	H.T. Cable connect.
16	Lock plate	50	Flame control box	71	Phototransistor
17	Inlet grill	51	Support plate	72	Photoresistor support
18	Flex diesel pipe	52	Switch	77	Stop button protection
19	Flex diesel pipe	53	Thermostat plug	78	Terminal board
20	Clip	54	Thermostat plug cover	79	Air adjustment shutter
21	Filter	55	Power cord	80	Diffuser ring
22	Flex diesel pipe	56	Lamp	81	Fuse
23	Handle	Danfoss		82	Cable fastener nut
24	Pipe cap	57	Diesel pump	83	Cable fastener
25	El. control box	58	Solenoid coil		
27	Control box cover	59	Solenoid valve body		

Disposal



The icon with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.

Fuel oil

The fuel oil must be drained from the device and collected. Fuels are to be disposed of according to the national regulations.

Declaration of conformity

Declaration of conformity in accordance with the EC Machinery Directive 2006/42/EC, Annex II, Part 1, Section A

We – Trotec GmbH – declare in sole responsibility that the product designated below was developed, constructed and produced in compliance with the requirements of the EC Machinery Directive in the version 2006/42/EC.

Product model / Product: IDS 20
IDS 30

Product type: oil heater

Year of manufacture as of: 2021

Relevant EU directives:

- 2014/30/EU: 29/03/2014

Applied harmonised standards:

- None

Applied national standards and technical specifications:

- None

Manufacturer and name of the authorised representative of the technical documentation:

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Place and date of issue:
Heinsberg, 12.07.2021

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