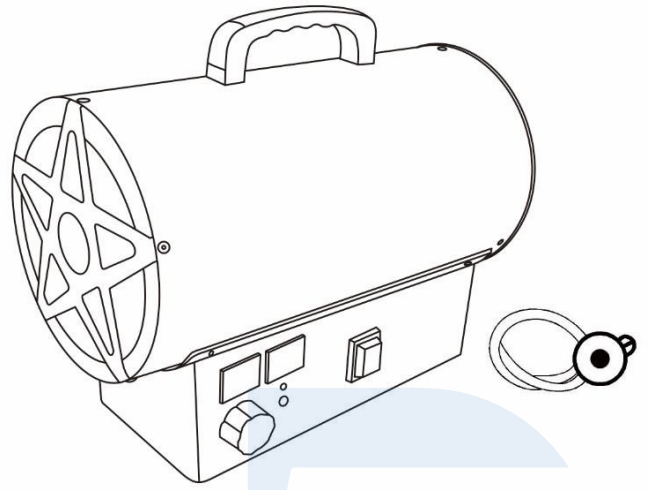
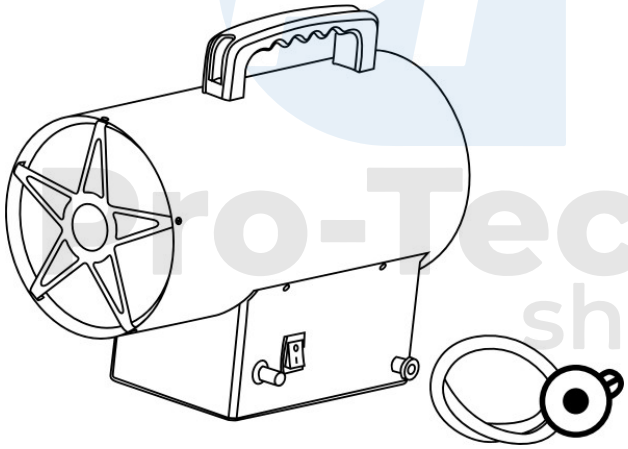
# INDUSTRIAL LPG GAS HEATER





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## Instructions for use

**HEATER SPECIFICATIONS**

| Model | GH-10M | GH-15M | GH-30M | GH-50M | GH-15 | GH-30 | GH-50 | GH-100 |
|---|---|---|---|---|---|---|---|---|
| **Power** | 10KW | 15KW | 30 KW | 50 KW | 15KW | 30 KW | 50 KW | 100 KW |
| **Fuel consumption** | 0,73 kg/h | 1,09 kg/h | 2,18 kg/h | 3,63 kg/h | 1,09 kg/h | 2,18 kg/h | 3,63 kg/h | 6,66 kg/h |
| **Gas type** | For use with LPG | For use with LPG | For use with LPG | For use with LPG | For use with LPG | For use with LPG | For use with LPG | For use with LPG |
| **Pressure gas supply** | 0.3Bar | 0.3Bar | 0.7Bar | 1.5Bar | 0.3Bar | 0.7Bar | 1.5Bar | 2.5Bar |
| **Electrical power input** | 220-240 V ~ 50 Hz | 220-240 V ~ 50 Hz | 220-240 V ~ 50 Hz | 220-240 V ~ 50 Hz | 220-240 V ~ 50 Hz | 220-240 V ~ 50 Hz | 220-240 V ~ 50 Hz | 220-240 V ~ 50 Hz |
| **No ignition** | Piezoelectric sensor: manual type | Piezoelectric sensor: manual type | Piezoelectric sensor: manual type | Piezoelectric sensor: manual type | Direct spark: Automatic type | Direct spark: Automatic type | Direct spark: Automatic type | Direct spark: Automatic type |

**NOTICES**

**YOUR SAFETY IS IMPORTANT TO YOU AND OTHERS, SO PLEASE READ THESE INSTRUCTIONS BEFORE USING THIS HEATER.**

**GENERAL DANGER:**

**FAILURE TO FOLLOW THE SAFETY PRECAUTIONS AND INSTRUCTIONS SUPPLIED WITH THE HEATER MAY RESULT IN DEATH, SERIOUS BODILY INJURY AND LOSS OF OR DAMAGE TO PROPERTY DUE TO THE HAZARD FIRE, EXPLOSION, BURNS, SUFFOCATION, CARBON MONOXIDE POISONING OR ELECTRIC SHOCK.**

**THIS HEATER SHOULD ONLY BE USED OR SERVICED BY PERSONS WHO UNDERSTAND AND FOLLOW THE SAFETY INSTRUCTIONS.**

**NOT INTENDED FOR USE IN A RECREATIONAL VEHICLE (MOTORHOME).**

- Use only in a well-ventilated area and away from combustible materials
- DO NOT use for space heating in domestic dwellings. For use in public buildings, refer to national regulations.
- After use, turn off the gas supply at the cylinder valve.
- Before lighting the burners, make sure the fan is working properly.

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● This appliance may be used by children 8 years of age and older and persons with reduced physical, sensory, or mental abilities or lack of experience and knowledge, provided they are supervised or instructed in the safe use of the appliance and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance must not be carried out by unsupervised children.

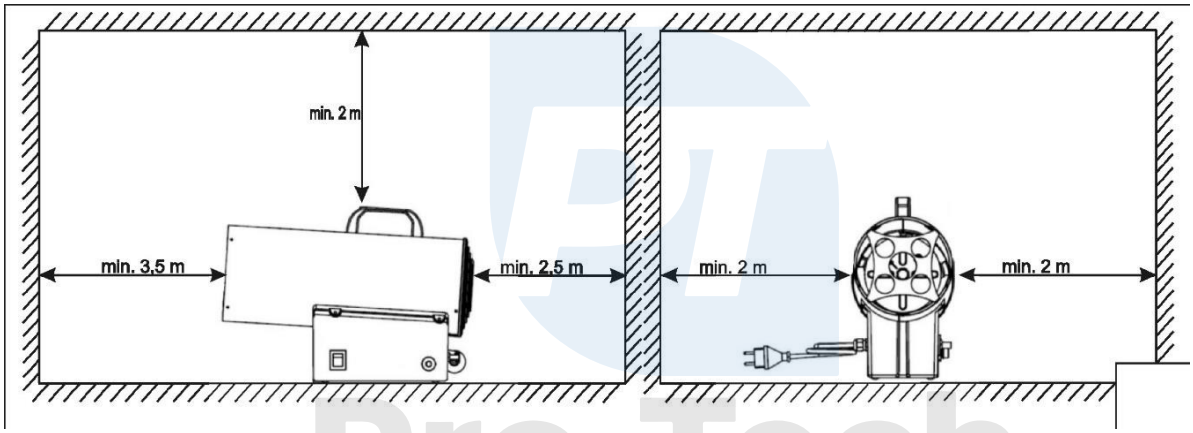
● WARNING: To prevent overheating, do not cover the heater.

● Children under the age of 3 should be kept out of reach unless supervised at all times.

● Children between the ages of 3 years and 8 years may only switch the appliance on/off if it has been switched on, placed or installed in its normal operating position and they are supervised or have been instructed to use the appliance in a safe manner and understand the risks involved. Children between the ages of 3 years and 8 years must not switch on, regulate or clean the appliance, or carry out user maintenance.

● WARNING - Some parts of this product may become very hot and cause burns. Special care must be taken where children and vulnerable persons are present.

**Safe placement distance**




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**1. GENERAL GUIDELINES**

1.1 The heaters mentioned in this manual must only be used outdoors or in a well-ventilated environment.

1.2 For each kW, a permanent ventilation of 25 $cm^3$ is required, evenly distributed between floor and ceiling, with a minimum output of 250 $cm^3$.

1.3 Gas cylinders must be used and stored in accordance with applicable regulations.

1.4 Never direct the hot air stream towards the bottle.

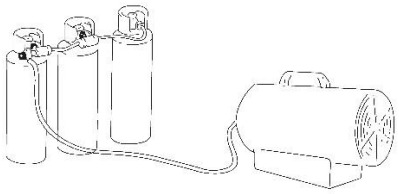
1.5 Use only the supplied pressure regulator.

1.6 Never use the heater without the cover.

1.7 Do not exceed 100 W/$m^3$ free room. The minimum room volume must be greater than 100 $m^3$.

1.8 Do not block the inlet or outlet parts of the heater.

1.9 If the heater has to work for a long time at its maximum output, it is possible that ice will form on the bottle. This is caused by excessive evaporation. Not for this or any other reason should the bottle not be heated. To avoid this effect, or at least limit it, use a large bottle, or multiple bottles connected together (see illustration).



1.10 Do not use the heater in basements or in any room below ground level.

1.11 In the event of a malfunction, contact the service department.

1.12 After use, turn off the tap of the gas cylinder.

1.13 The gas cylinder must always be replaced according to safety rules, away from any possible ignition source.

1.14 The gas hose must not be twisted or bent.

1.15 The heater must be located where there is no risk of fire, the hot air outlet must be at least 3 m from any combustible wall or ceiling and must never be directed at the gas cylinder.

1.16 Use only original gas hose and spare parts.

1.17 The heaters described in this leaflet are not intended for domestic use.

1.18 If a gas leak is detected or suspected, immediately close the gas cylinder, turn off the heater and do not use it until it has been inspected by a qualified service center. If the heater is installed indoors, ensure good ventilation by fully opening doors and windows. Do not create sparks or a naked flame.

1.19 In case of any doubt, please contact your supplier.

**Description of equipment**

This appliance is a gas-fired direct-fired heater. It is equipped with a fan driven by an electric motor, which forces airflow to promote air circulation in the room and also increases the amount of oxygen in the combustion chamber for efficient combustion. The air mixed with the hot flue gases discharged from the heater causes the room to heat up.

The device is equipped with multifunctional electromagnetic protection in case of power supply problems, flame extinction and overheating. These three types of protection protect against gas leakage and possible carbon monoxide poisoning and
fire hazard due to gas leakage. The gas flow control valve installed in the heater allows the amount of heat emitted to be regulated as required.

**2. INSTALLATION**

2.1 Plug the heater into a suitable electrical socket /230V~50Hz

2.2 Make sure the machine is properly grounded.

2.3 Connect the gas supply hose to the pressure regulator and connect the regulator to a suitable LPG cylinder.

2.4 Open the stopcock on the cylinder and check the supply hose and fittings for gas leaks. It is recommended to use an approved leak detector for this operation.

2.5 NEVER USE FIRE IN THE VICINITY.

2.6 For automatic appliances, plug the thermostat into the socket on the appliance and set it to the desired temperature.

**3. INSTRUCTIONS FOR USE**

**PREPARATION FOR OPERATION**

1. Check that the heater is not damaged by shipping.

2. Connect the hose and regulator assembly to the LPG cylinder by turning the nut counterclockwise to the LPG cylinder valve outlet and tighten securely.

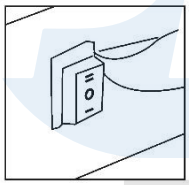
3. Open the gas valve of the cylinder and check all gas connections using a soap and water solution.

4. Connect the power cord to a well-grounded 220 VAC, 50 Hz power source.

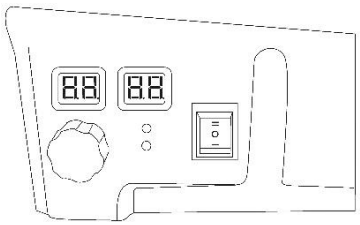
**3.1 FIRE**

**3.1.1 LIGHTING /automatic ignition.**

a. Switch the main switch to position I and the motor will start. The digital display shows the room temperature.



b. Open the valve and switch the main switch to position II. The left window of the display sets the temperature and the right window is the room temperature. It will automatically light when the set temperature is higher than the room temperature.



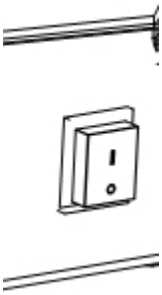
c. Adjust the gas flow pressure to the desired heat output by turning the pressure reducing valve wheel counterclockwise to increase pressure or clockwise to decrease.

d. If the flame ignites, but after a few seconds the heater locks up, the RESET light will illuminate. Wait one minute, then unlock the heater by pressing the RESET button and repeat the start-up.

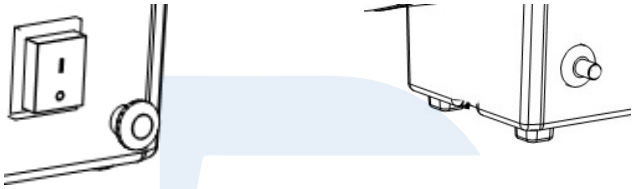
e. If the problem persists, contact the service.

**3.1.2 Ignition / Manual ignition**

a. Switch the main switch to position I and check that the fan is running properly. (Fig. 2.)



b. Press the gas valve button and repeatedly press the piezoelectric igniter until the flame lights up. (Fig. 3-4)



c. When the flame ignites, hold the valve button down for approximately 10 seconds. If the heater stops after releasing the valve button, wait one minute and restart, holding the valve button down longer.

d. Adjust the gas flow pressure to the desired heat output by turning the pressure reducing valve wheel counterclockwise to increase pressure or clockwise to decrease.

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**ATTENTION**

**If the ignition is difficult or erratic, make sure that the fan is not blocked and that the air inlet and outlet are not blocked before repeating the ignition.**

**3.2 OFF**

To stop the heater, turn off the tap of the gas cylinder. Let the fan run until the flame goes out and then switch the fan switch to position O.

**3.3 VENTILATION**

a. The heater can also be used as a fan.

b. In this case, remove the gas supply hose and connect the heater plug to a suitable electrical source.

c. Set the fan switch to position I.

**!!!ATTENTION**

**Danger of suffocation**

1. Do not use the heater to heat living areas.

2. Do not use in unventilated areas.

3. The flow of combustion and ventilation air must not be obstructed.

4. Proper ventilation air must be provided to meet the combustion air requirements of the heater being used.

5. Lack of proper ventilation air will lead to improper combustion.

6. Improper combustion can lead to carbon monoxide poisoning, resulting in serious injury or death. Symptoms of carbon monoxide poisoning can include headaches, dizziness, and difficulty breathing.

**SMELL OF FUEL GAS**

**LPG and natural gas have artificial odorants added specifically to detect fuel gas leaks.**

**If there is a gas leak, you should smell fuel gas. Since propane (LP) is heavier than air, you should smell the gas odor low to the floor. ANY GAS IS A SIGNAL FOR IMMEDIATE ACTION!**

1. Do not take any action that could ignite the fuel gas. Do not use any electrical switches.
Do not pull any power supply or extension cords. Do not light matches or any other source of flame. Do not use your phone.

2. Get everyone out of the building and away from the area immediately.

3. Close all propane (LP) gas tank or fuel cylinder inlet valves, or the main fuel inlet valve located on the meter if using natural gas.

4. Propane (LP) gas is heavier than air and can settle in low areas. If you have reason to suspect a propane leak, avoid all low spots.

5. Use a neighbor's phone and call your fuel gas supplier and the fire department. Do not re-enter the building or area.

6. Stay out of the building and out of the area until the fire department and your heating gas supplier declare it safe.

7. DO have a fuel gas service worker and the fire department check for gas leaks. Ask them to ventilate the building and area before returning. Properly trained service personnel must repair any leak, check for further leaks, and then light your appliance.

**4. MAINTENANCE**

4.1. Repairs or maintenance must only be carried out by qualified personnel.

4.2. The equipment must be inspected by a qualified technician at least once a year.

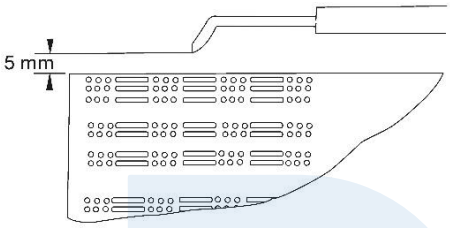
4.3. Regularly check the condition of the gas hose and gas regulator, if they need to be replaced, use only genuine spare parts.

4.4. Before starting any maintenance on the heater, disconnect it from both gas and electricity.

4.5. If the unit has not been used for an extended period of time, it is recommended that the technician perform a general inspection prior to use. It is important to check the following:

4.5.1. Check the condition of the gas supply hose regularly and use only original spare parts when replacing it.

4.5.2. Check the position of the starting electrode (see Fig. 4).

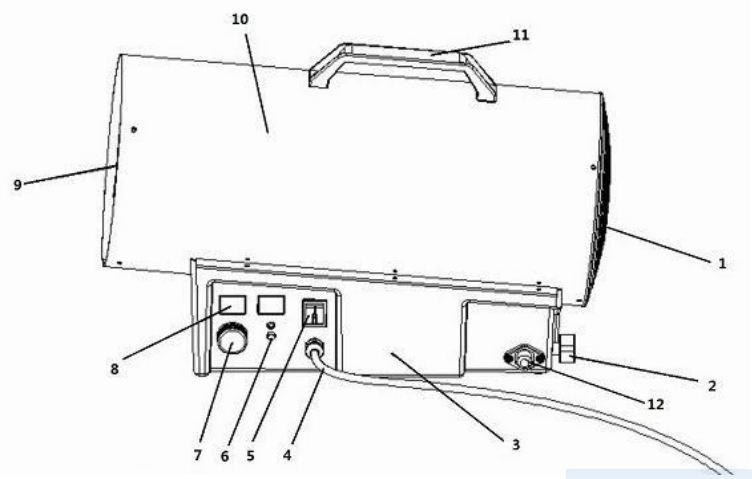
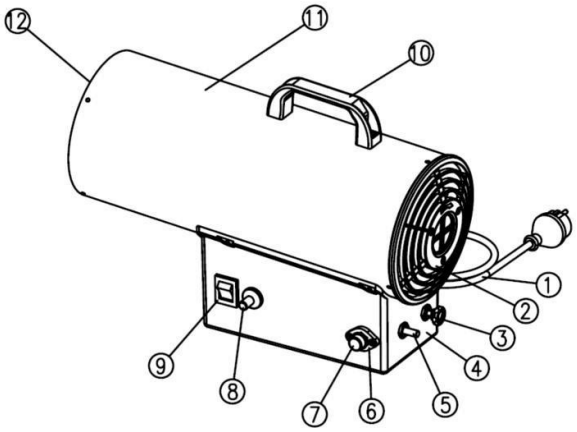



4.5.3. Check the safety thermostat and thermocouple connections: they must always be clean.

If necessary, clean the fan blade and the inside of the heater with compressed air.

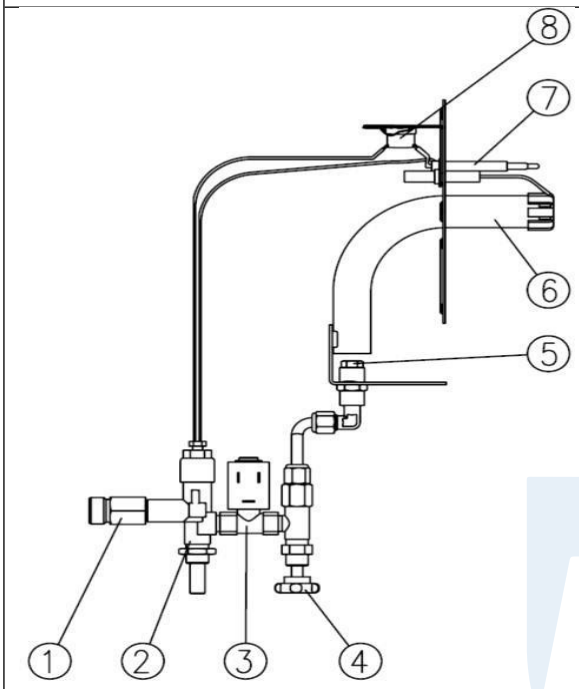
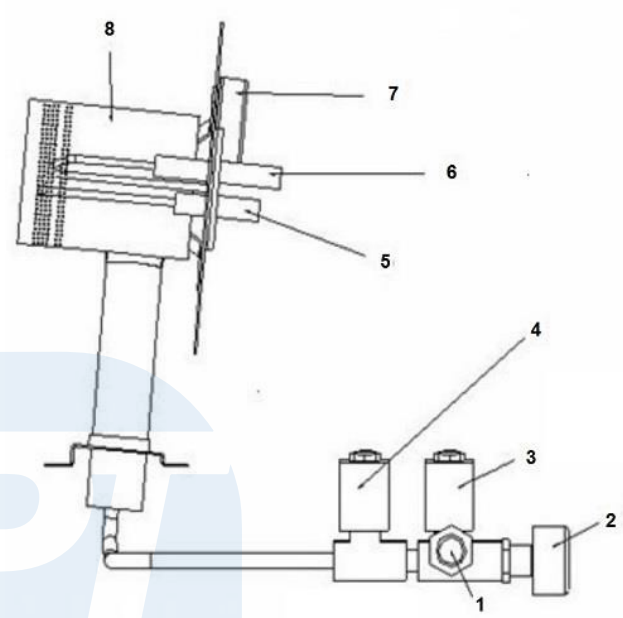
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***Construction of the heater***

| A: (automatic control): | B: (manual operation): |
|---|---|
|  |  |
| 1. Air inlet cover<br>2. Knob for heat output control<br>3. Heater base/control panel<br>4. Supply pipe<br>5. Power switch<br>6 Reset button<br>7 New temperature setting options<br>8 Temperature display<br>9. Hot air outlet cover<br>10. Body<br>11. Transport handle<br>12. Gas connection | 1. Power cord<br>2. Air inlet cover<br>3. Knob for heat output control<br>4. Heater base/control panel<br>5. Flame extinction protection button<br>6. Gas connection<br>7. Connection plug<br>8. Spark button<br>9. Power switch<br>10. Transport handle<br>11. Body<br>12. Hot air outlet cover |

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## GAS SUPPLY DIAGRAM

| A: (automatic control) | B: (manual operation): |
|---|---|
|  |  |
| 1. Gas connection<br>2. Valve setting<br>3. Solenoid valve<br>4. Solenoid valve<br>5. Flame sensor<br>6. Ignition switch<br>7. Thermostat<br>8. Burner head | 1. Gas connection<br>2. Protection against the effects of flame failure<br>3. Solenoid valve<br>4. Gas control valve<br>5. Gas nozzle<br>6. Burner head<br>7. Thermocouple<br>8. Thermostat |

When the appliance is connected to the cylinder, the gas passes through the following components of the gas system:

Gas connection - flame failure protection - solenoid valve - quantity control valve
gas supply/flame size - gas nozzle - gas is ignited by a high voltage electric spark and burns at the burner head - thermocouple heated by the flame generates voltage - thermostat activates the circuit by opening
of the solenoid valve in the flame failure protection element, gas flows continuously burning in the combustion chamber.

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**5. PROBLEM SOLVING**

Models with automatic ignition

| PROBEM | CAUSES | SOLUTIONS |
|---|---|---|
| Engine not working | No electricity supply. | Check the terminal block with a tester. |
| | The room thermostat is set too low. | Adjust the thermostat to a higher temperature. |
| | The safety thermostat is on. | Wait approximately one minute and then press the RESET button. |
| The motor works, but the burner does not light and after a few seconds the heater stops | The gas valve of the cylinder is closed. | Open the gas valve |
| | The gas cylinder is empty. | Use a new gas cylinder. |
| | The nozzle is blocked. | Remove the nozzle and clean it. |
| | The solenoid gas valve is not open. | Check that the solenoid valve is working. |
| | He's not throwing a spark. | Check the position of the electrode. |
| The burner turns on, but after a few seconds the heater stops | No connection to the earthing system. | Check and connect correctly. |
| | Faulty connection between sensor and safety device. | Check and connect correctly. |
| | Defective safety device. | Replace the safety device. |
| The heater stops during operation | Excessive gas supply. | Check the pressure regulator and replace it if necessary. |
| | Insufficient air flow. | Check that the engine is working properly. |
| | Insufficient gas supply due to the formation of ice on the cylinder. | Check and use a larger bottle, or two bottles joined together. |



Attention! The symbol displayed means that the waste equipment cannot be disposed of with other waste (under penalty of a fine). Hazardous components found in electrical and electronic equipment have a negative impact on the natural environment and human health.

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