



ECONOMICAL HEATING
SOLUTIONS

PRODUCT GUIDE

UNIQUE LOCAL, CONVECTIONAL HEATER APPLIANCE - MIKA-6EU

6 KW CONDENSATION MINI HEATER - MIKA-6E KON



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Recognizing an unfilled, still empty segment of the gas appliance market, our company implemented the MIKA-6EU 6 kW heater. Our newest improvement is the MIKA-6E KON condensation mini heater.

These appliances were constructed mostly for the Hungarian market, using Hungarian workforce, and mostly constructed with Hungarian accessories. As other producers do not implement such appliances with small power, we are unique in the gas appliance market, supported with industrial design protection.

Regulation (EU) 2015/1188 with regards to the eco-design requirements for local space heaters was implemented in 2015. Power of the appliances were separated on the basis of the direct heat release in the room – minimum 6% (condensation) and the water-side power used for the heating of other rooms. The direct heat release of the MIKA-6E appliance family is between 7-8% with regards to the global power, so as Producers, we qualify the appliances as local appliances, whose prior task is the heating of the room where the appliance was placed.

In this case, the appliance is not subject to the Regulation (EU) 2013/813, but the Regulation (EU) 2015/1188. The new name of the appliances are:

UNIQUE LOCAL, CONVECTIONAL HEATER APPLIANCE WITH SUPPLEMENTARY HEATING FUNCTION!

The new certificates can be found at our homepage!

Management of Technorgáz Energiaipari Kft.



NEW DEVELOPMENT MIKA-6EU

- Flame modulation guidance, digital function displays
- Automatic gassing function
- Electric ionization ignition

MOST IMPORTANT MAIN FEATURES:

- Flame modulation guidance, digital function displays
- Automatic gassing function
- Electric ionization ignition
- If required, an external temperature sensor can be attached to the appliance, whose goal is to increase the internal heating temperature when the external temperature falls, causing a decreasing feeling of cold!
- System (water) pressure checking function (in case of a difference, the appliance is shut down)
- Security operation checking (pump, ventilator, temperature of water)
- Indirect boiler guidance
- Members of the MIKA-6E-type family unit incorporate the benefits of convectors and water central heaters. With their installation the modernization of heating and hot water supply of 60-70 m² apartments or houses can be done without the use of a chimney!

MAIN FEATURES:

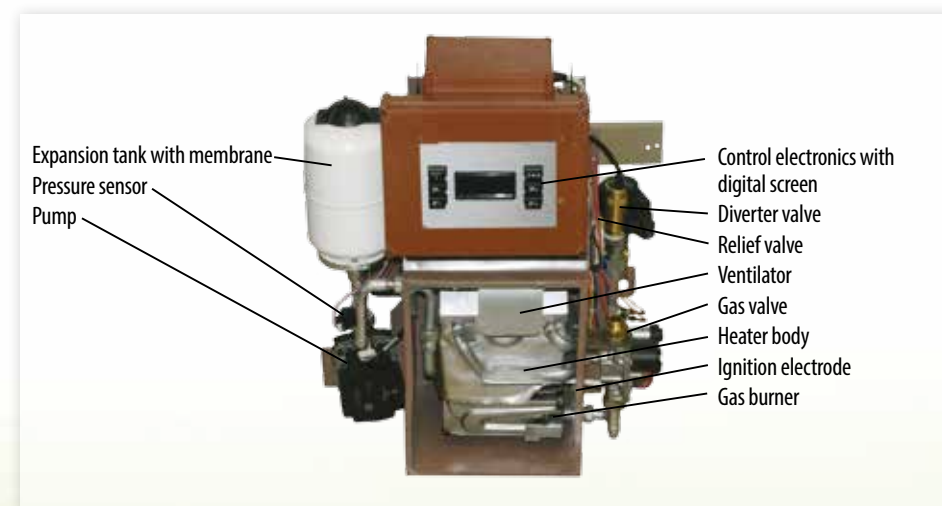
- Can be controlled between 3.5-6.0 kW, according to individual demands.
- Small size, high efficiency (over 90%). Outgoing flue gas temperature is 150-160 °C, in contrast to the 240-270 °C of convectors.
- Our appliances are constructed with rear heating water and gas outlet, so they can be easily fit in case of low fitting height, too.
- It contains all the fittings built in: gas valves, electronic controller with digital screen, pump, security appliances, 2-liter Aquasystem expansion tank.
- A great advantage of the system is that there is no need to build a chimney, so the modernization of heating can be done in a more cost-efficient way, than by the use of a conventional heater needing a chimney.
- **THE FLUE GAS EXITS THROUGH THE PIPE SYSTEM, SUPPORTED BY THE USE OF A FAN, SO THERE IS NO NEED TO WORRY ABOUT THE FLUE GAS BACKFLOW AND THERE IS NO NEED TO OBTAIN A LICENCE FROM THE CHIMNEY-SWEEP COMPANY!**
- The central heating system fitted with radiators provides even warmth in every room with 30% energy saving compared to the existing heating system.
- With the help of our device, the heating of the bathroom can also be solved with radiators or a heatable towel rack. (In the old individual heating system this function was performed by the wall heat panel, which used the oxygen from the room and the flue gas exited to the room, too. The appliance was not controllable, so for reaching the appropriate temperature, it had to be started up on time.)
- The turbo version of MIKA-6EU can be installed anywhere meeting the requirements of the gas supplier! The 0.65 mm borehole in the wall does not require an unloaded wall or a building permission, besides it does not have to be installed under a window, either!
- The appliance does not contain a heater body, its heat release is maximum 0.5 kW, so a radiator needs to be installed next to it, as well as in all other rooms that need to be heated. This way a more modern and economical central heating system can be constructed.
- Due to the low surface temperature, we do not have to count with the unpleasant effect of the burning dust, either.
- Due to the high efficiency of the appliance (91%), a smaller steam evaporation can be experienced from the flue pipe (in colder periods), which is a normal phenomenon.

TECHNICAL DATA:

Name	Unit	MIKA-6EU
Height:	mm	580
Width:	mm	395
Depth:	mm	260
Mass:	kg	18,5
Type of leading away of flue gas:	-	C ₁₃
Reference gas:	-	G 20
Nominal heat load in reference to calorific value:	kW	6,0
Nominal heat-technological heat power:	kW	5,5
Nominal water-side heat power:	kW	5,0
Nominal radiator-side heat power:	kW	0,5
Heat-technological efficiency at nominal heat load in reference to calorific value:	%	91,5
Gas pressure at joining points:	mbar	25
Bulb pressure at nominal heat load:	mbar	9,5
Minimum pressure of heating circle:	bar	0,5
Pressure class:	bar	2 PMS = 3 bar
Heater connection:	-	G"1/2"
Gas connection:	-	G ½
NOX class:	-	5
Flue gas lead-away:	-	(wall thickness 40/60mm, d=40mm, 250-550mm, extend beyond: 50mm. The turbo pipe can be cut to size according to the thickness of the wall.)
Nominal voltage (V):	-	230
Power consumption (W):	-	max. 55W
Electric security:	-	IP44
Appliance category:	-	I _{2H}
Country of destination:	-	EU
PIN number of certificate:	-	1008 CS 3049
Available colours: (white)	-	white

The length of the flue gas pipe can be adjusted between 250-550 mm, depending on the width of the wall it is installed into.

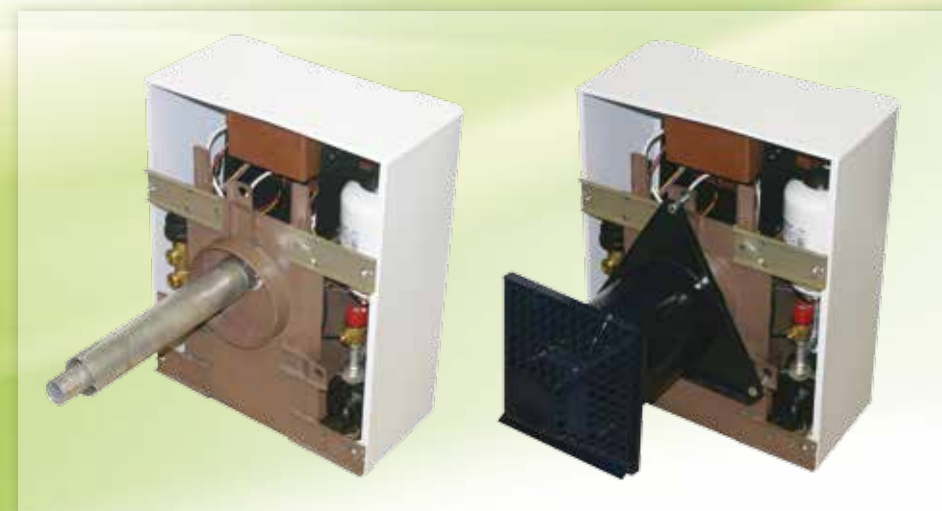
MAIN CONTROLS AND COMPONENTS OF MIKA-6EU / MIKA-6EU TURBÓ HEATER APPLIANCE

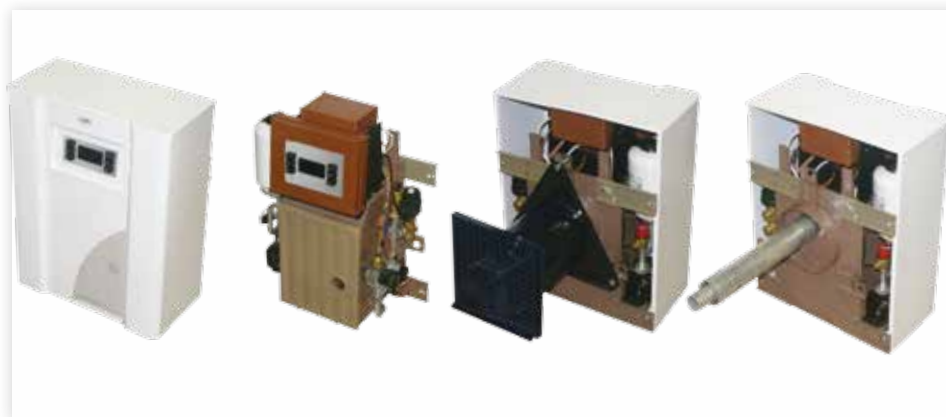


The heater is basically regulated to G20 gas, which is the most generally used type of gas all over Hungary these days.

The appliance works absolutely automatically with an electronic control and a room thermostat which is not an accessory of the appliance. The room temperature is kept even by switching the main burner on and off.

When the heater is powered on, the electronics automatically start the air discharge function during of 1-2 minutes.





TECHNICAL FEATURES:

The control panel is made up of a step-motor gas valve, the electronics, and a circulation pump (Grundfos). The temperature-control of the appliance is absolutely automatically controlled by NTC, the temperature of the flat is controlled by a room thermostat within 0.5 °C (the room thermostat is not an accessory of the system, it is chosen by the customer, the controlled voltage is 12V.)

Combined gas valve: Honeywell Atmix gas valve

Security: ionization flame guard, VTC temperature control

The appliance has an overheat switch, so in such cases the appliance shuts down automatically. Re-start is possible by pressing the RESET button, but it is practical to check the reason of the shut-down before and to have the possible failures mended.

Hot water supply:

The diverter valve version of our heaters (MIKA-6EU.V, MIKA-6EU.V Turbo) can be used to supply hot water besides the heating. It is advised to install the appliance to the nearest spot next to the bathroom, decreasing the length and difficulty of the piping.

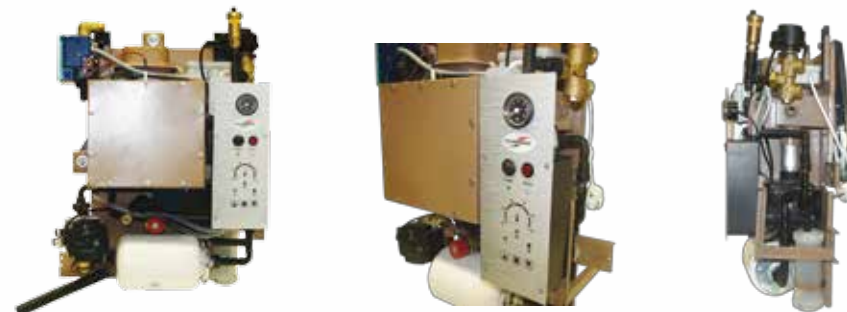
The appliance contains all the supplementary fittings built in (diverter valve + electronic control).

To have the system work, it is necessary to install an indirect boiler to the bathroom, too. There are types constructed with an electric heating insertion, so they could be used as an electric boiler, too.

The diverter valve switches between the heating and hot water functions, according to the demands.

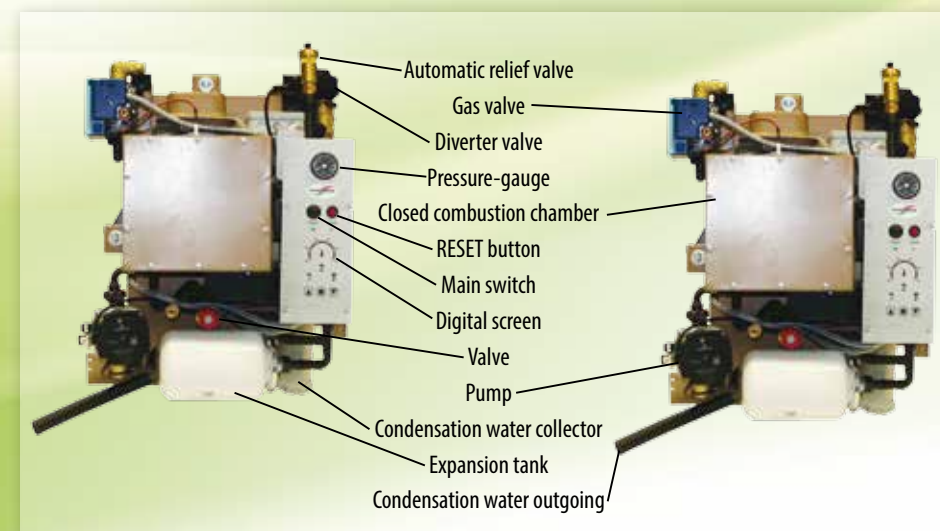
The total heating time of an 80l boiler is 30-70 minutes depending on the temperature and type, the after-heating requires 20-30 minutes. The hot water supply is priority, the stop of heating for 30-70 minutes is not significant. The heating function is approximately 10 hours, taking a 24-hour time frame into consideration.

OUR LATEST RELEASE PRODUCT IS THE CONDENSATION AND IONIC MINI HEATER BOILER POWERED 6KW



MAIN FEATURES:

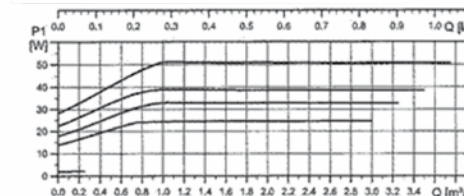
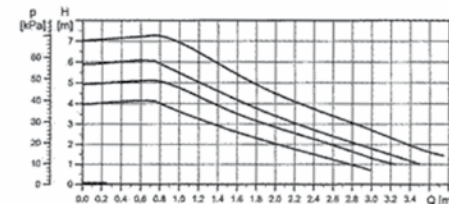
- Contains all fittings built in: gas valve, pressure-gauge, pump, security controls, electronics, 2-liter expansion tank
- Two heat-switcher system
- Automatic control
- Seasonal efficiency: 87%
- Uniquely developed microprocessor control, simple usage
- In case of favourable operational circumstances – with the use of an external temperature sensor thermostat – the condensation heater is able to achieve a 10-16% saving compared to an old type, conventional gas heater.
- In the warm-up period, the appliance works at its maximum power up until the returning water temperature reaches the value set (30-40 °C), then switches to condensation work (reduced power).



Technical data:

Name	Unit	MIKA-6E KON
Height:	mm	600
Width:	mm	473
Depth:	mm	240
Mass:	kg	22
Appliance category:	-	I _{2H}
Country of destination:	-	HU
Nominal gas pressure at connection:	mbar	25
Nominal heat load in reference to calorific value:	kW	6,0
Nominal heat load in reference to combustion heat:	kW	6,7
Efficiency in reference to calorific value (nominal heat load: 80°C/60°C):	-	93,5
Efficiency in reference to combustion heat (nominal heat load: 80°C/60°C):	-	84,6
Condensation efficiency in reference to calorific value (30% heat load: 50°C/30°C):	-	103,0
Condensation efficiency in reference to combustion heat (30% heat load: 50°C/30°C):	-	92,7
Nominal heat power in reference to calorific value:	kW	5,6
Bulb pressure at nominal heat load:	mbar	12,5
Bulb pressure at 30% heat load:	mbar	6,5
Gas consumption at nominal heat load (15°C, 1013.25 mBar, G20):	m ³ /h	0,63
Gas connection:	-	G ½
NOX class:	-	5
Type of leading away of flue gas:	-	C ₁₃
Flue gas lead-away:	mm	d/D 40/65
Wall-clasp:	mm	250-550
Pressure class:	-	2. PMS = 3 bar
Combined gas valve:	-	843 SIGMA
Automatics:	-	579 DBC
Nominal voltage (AC):	V	230
Power consumption:	W	max. 55 W
Security:	-	IP 44
Number of certificate:	-	MB 69251791 0001

Combined gas valve: 843 SIGMA water and room temperature controlled gas valve
Security: ionization flame guard, NTC temperature sensor, water temperature control
Type of modular heat circulation pump: Grundfos UPM3 FLEX AS



Condensation is caused by the 130°C flue gas streaming from the prior heat exchanger and the returning low-temperature water, during which the heat of the extra water precipitating from the steam contained in the exiting flue gas increases the efficiency of the appliance.

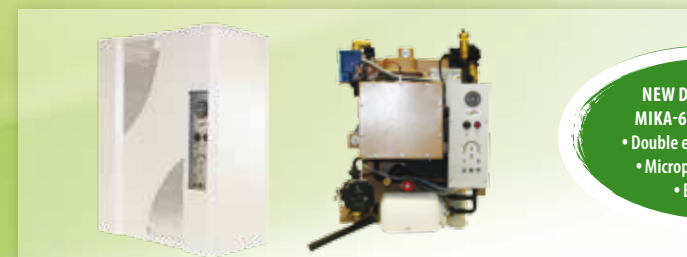
The appliance is energized with the help of the electric main switch. When switching on, the processor included in the electronics runs a diagnostics to check if everything works well, and if all sensors and their connections are usable for the secure operation. If everything is secure, the POWER led and the ACTUAL WATER TEMPERATURE led switches on and short beeping sound can be heard. If a fault is found, the ERROR and the connected led begin switching on and off, and a long beeping sound can be heard. If condensation operation is needed when switching on the room thermostat, the appliance starts at full load and operates this way for 2 minutes before switching to condensation operation. (This is normal operation!)

If the electronics of the appliance sensor any faults during heating, the gas is switched off, the ventilator is switched off after 20 seconds, and the pump is switched off after 30 seconds unless it is caused by overheating. In that case, the pump operates up until the heater cools down.

Gripping obstruction: If there wasn't a need for heating in 24 hours, the electronics starts up and operates the pump for 30 seconds and the ventilator for 15 seconds.

Freezing security: If the foregoing water's temperature does not reach 5°C, the heating is started until the temperature of the returning water reaches 10°C.

It is compulsory to insert a magnetic sludge separator into the heating system!
It is a guarantee condition! Recommended type: Omega magnetic water filter (OMV-1000-01)



NEW DEVELOPMENT!
MIKA-6E CONDENSATE!
 • Double exchanger solution
 • Microprocessor control
 • Easy to use

Installation, construction of the system:

Conditions of the placement and installation are regulated by the National Town Planning and Building Requirements and Regulation (Ministry of National Economy) 11/2013 (III.21)

If a total gas pipe reconstruction (cutting the gas pipe) happens, it is needed to prepare a technical plan of the system connected to the appliance. The heating system has to be constructed on the basis of this approved plan. After construction an official technical-security check is also needed.

If differing from the above, i.e. the reconstruction does not affect the existing gas pipes, the type of lead-away of the flue gas is the same (parapet) and our heater takes the place of another appliance of the same power (F 8.50), then it is enough to report it to the gas supplier, so the process is qualified as a simplified change of appliances.

During the design of the radiators it has to be taken into account that **the appliances have a very small water capacity (an appliance can be loaded with radiator units of 10-12kW)**, thus the system has to be oversized in every case to ensure the economical heat-up.

During the construction of the system the main pipe in case of copper tube has to be at least size 18, while for the five-layer pipe it has to be at least size 20 in diameter.

If using smaller diameter pipes, streaming faults can appear, causing extra heat which can damage the appliance (heater body, pump). Repairing this is not included in the guarantee! It is advisable to establish venting points with automatic air vents!



The ideal water temperature in case of heating with radiators is 60-70°C, while in case of floor heating it is 40-50°C. When using partial floor heating (f.e. in the bathroom), we advise to join the returning pipe of one of the radiators into the floor. In all cases the foregoing and returning heat pipes have to be supplied with shut-off valves, so the appliance could be disconnected from the system.

To ensure the flow of water, two radiators have to be in operation all the time!

*Independent from the number of radiators, we do not advise to supply the radiators with temperature control valves (thermo heads), as the appliance does not contain a controller for lack of water. Closing of the thermo heads can even cause damage to the appliance (heater body, pump), and repairing this is not included in the guarantee, it is charged to the consumer! If the appliance is put into operation with closed radiators, it can even result in the damage of appliance, **and repairing this is not included in the guarantee!***

After energizing the appliance, the electronics starts the gassing function automatically, which takes approximately 1-2 minutes. The gassing of the system has to be done at the radiators. The first warm-up is approximately one hour. The apartment reaches the thermal equilibrium in about 3-4 days! After setting up the system, it is necessary to adjust the power (between 3.5-6.0 kW) to the needs of the flat, which is part of the start-up work. The back-control does not result in the decrease of the efficiency! The system does not need to be filled with antifreeze, because the new MIKA-6EU is supplied with antifreeze security. Before filling up, all valves have to be opened, and the releasing valves have to be closed.

IT IS FORBIDDEN TO CUT OUT OR DAMAGE THE SECURITY SYSTEM, BECAUSE DAMAGES DUE TO THESE ARE NOT COVERED BY THE GUARANTEE!

IT IS A GUARANTEE CONDITION TO HAVE THE SET-UP SYSTEM CLEANED WITH HOT WATER AND CHEMICALS (F.E. FERNOX DS40) AND TO FILL IT UP WITH CONDITIONER LIQUID (F.E.: Fernox F1)!

IT IS ALSO A GUARANTEE CONDITION TO INSTALL A MAGNETIC SLUDGE SEPARATOR INTO THE SYSTEM WHOSE LACK MIGHT CAUSE DAMAGES WHICH ARE NOT COVERED BY THE GUARANTEE!

Recommended type: Omega magnetic water filter (OMV-1000-01)

ATTENTION! IF THE CLOSED COMBUSTION CHAMBER IS OPENED, THE OPERATION OF THE SYSTEM IS FORBIDDEN AND LIFE-THREATENING!

As all members of the MIKA-6E appliance family contain all the fittings (pump, electronics, expansion tank) necessary for the operation, an earth connection 230V-50Hz power supply electric connection is also needed for the operation. (The appliance basically includes all electric connections, whose disarray can only be done by a technician.)

OPERATION, MAINTENANCE:

To set up the appliance, an equipotential bonding and a report are needed.

Producer ensures a 1+1 year guarantee to all members of the MIKA gas appliance family, which starts on the day of the set-up. **A condition of the above is the yearly, reported checking (which is subject to fees)!**

MAINTENANCE IS NOT A GUARANTEE WORK!



MIKA-6EU



MIKA-6E KON



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