

EC Declaration of Conformity



Heidebrenner GmbH
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hereby declares that the **ECDxx/ECGxx electric lava-rock grills** belongs to the provisions of the following relevant harmonization legislation of the EC directives.

- 2006/42/EC Machinery directive
- 2014/30/EC EMV directive
- 2014/35/EU Low voltage directive
- According to Annex I No. 1.5.1. of the Machinery Directive 2006/42/EG, the protection goals of the Low voltage directive 2014/35/EU (Low Voltage Directive) were also complied with.

The device is designed for use in commercial kitchens and may only be used by trained specialist personnel. Conformity was issued and verified for the electric lava-rock grills in 2021.

The authorized person for compiling the technical documentation in terms of the machinery directive is: **Mr. Dipl.-Ing. (FH) R. Arnold**

The following standards had been used across the evaluation to ensure the proper implementation of the protection requirements and safety goals specified in the EC directives

- DIN EN ISO 12100-1
Safety of machines: terminology, methodology
- DIN EN ISO 12100-2
Safety of machines: Technical principles
- DIN EN ISO 14121-1
Safety of machines: Principles for risk assessment
- DIN EN 60204-1
Electrical equipment of machines: general requirements
- DIN EN 62079
Generate instructions: structure, content and presentation
- Check according to EN 60204 VDE 0113

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(city, date)

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(Name, Position in the company)

According to the EMC Directive 2014/30/EU, the following harmonized standards apply:

- EN 61439-1:2011
Combination of one or more low-voltage switchgear with the associated equipment for controlling, measuring, reporting, protecting and regulating. Electrical equipment of the SK are, for example, circuit breakers, miniature circuit breakers, cables, terminals, etc.
- EN 61812-1:2011
Timer relays (relays with fixed time behavior) for industrial applications and for domestic use.
- EN 61000-3-3:2013
Electromagnetic compatibility (EMC, Part 3-3: Limit values and limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply networks for devices with a rated current $I \leq 16A$ per phase.
- EN 61000-3-12:2011
Electromagnetic compatibility (EMC, Part 3-12: Limit values and limit values for harmonic currents caused by devices and equipment with a rated current $I > 16A$ and $I < 75A$ per conductor, which are intended for connection to public low-voltage networks.
 - *The central control from Fluxron AG is equipped with a switched-mode power supply. This means that harmonics, sinusoidal oscillations whose frequency is an integer multiple of the fundamental frequency, and interharmonic harmonics, sinusoidal oscillations whose frequency is not an integer multiple of the fundamental frequency, are to be expected. The company Fluxron AG has demonstrated through the EMC tests that phenomena of mains feedback are excluded.*
 - *Jumo power controllers are subject to UL certification (DIN VDE 0100). The Jumo power controller always switches the effective resistance (load, tubular heating element) on and off at zero crossing. Current and voltage remain in phase. So-called flicker, temporal fluctuations in the operating voltages in the public power supply network are excluded by the power controller. A high load current of a consumer causes a voltage drop, which is often perceived as a change in the luminous flux of lamps (lumens). This would be a first clue.*
- EN 61000-6-3:2007
Electromagnetic compatibility (EMC) - Part 6-3: Basic standards and interference emissions for residential, business and commercial areas and small businesses.
- EN 61000-6-4
interference emission
- EN 61000-3-2:2014
Electromagnetic susceptibility (MV) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $I \leq 16A$ per phase).
- EN 60947-4-3:2014
Low-voltage switchgear and controlgear - Part 4-1: Contactors and motor starters - Electromechanical contactors and motor switches
- EN 60999-1
General requirements and special requirements for terminal points for conductors from 0.2 mm² up to and including 35 mm².
- EN 60730-1:2011
Automatic electrical controls for household and similar use - Part 1: General requirements

- EN 60730-2-7:2010
Automatic electrical controls for household and similar use - Part 2-7: Particular requirements for timers and timers.
Finder time relay
- EN 60730-2-8:2002
Automatic electrical controls for household and similar use - Part 2-8: Particular requirements for electrically operated water valves, including mechanical requirements.
Magnetic valve
- EN 62275
Cable management system - cable ties for electrical installations
- EN 61986
Connectors - safety requirements and testing
Hirschmann CA series for built-in devices
- EN 60603
Connectors for electronic equipment - Part 7: Detail specification for unshielded free and fixed connectors, 8-way
RJ 45 socket/plug between Hall knob and the thermostat
- EN 61058
Appliance switches - Part 1: General requirements
A vandalism switch (IP 67) with an illuminated ring (LED), conformity is assumed for this purchased item.
- EN 62444
Cable glands for electrical installations
Different types of PG screw connections are used.
- EN 60309-1
Plugs, socket-outlets and couplers for industrial use - Part 1: General requirements
Includes the device plugs CEE 400V~, 16A, 6h and CEE 400V~, 32A, 6h
- EN 60947-7-3
Low-voltage switchgear and controlgear - Part 7-3: Auxiliary equipment - Safety requirements for fuse terminal blocks
Weidmüller SAK 4/2.5mm² terminal blocks
Rated surge voltage up to U=8KV
- EN 60947-7-2
Low-voltage switchgear and controlgear - Part 7-2: Auxiliary equipment - Protective earth terminal blocks for copper conductors
Weidmüller EK 4/35 as protective conductor terminal on the base plate
- EN 61210
Connection material - tab connectors for electrical copper conductors - safety requirements
Includes all connections to energy regulators, tangential fans, electronic thermostat, appliance switches, etc.
- EN 61076-3-118
Connectors for electronic equipment - Product requirements - Part 3-118: Rectangular connectors - Detail specification for a power connector 4-pole with PE and push-pull coupling.
Includes the Hirschmann CA type connectors for built-in appliances
- EN 60947-1
Low-voltage switchgear - Overcurrent protective devices - Part 1: Application of short-circuit ratings.

- EN 60269-4
Low-voltage fuses - Part 4: Additional requirements for fuse-links for the protection of semiconductor devices
- EN 60269-1
Low voltage fuses - Part 1: General requirements

Sicherheit

- EN 50274
Low-voltage switchgear combination - Protection against electric shock - Protection against unintentional contact with dangerous live parts
Protection against electric shock is excluded as long as the five safety rules are observed
Touching dangerous parts (hot tubular heaters/cast iron grates) cannot be completely ruled out.
- EN 50178
Electrical equipment of high-voltage systems with electronic equipment
In the case of electronic equipment, people must be protected against dangerous body currents in such a way that a single fault does not cause any danger.
The following principle applies in canteen kitchens: Cable and wiring systems in premises where there is a risk of fire must be protected by protective measures (RCD with a rated differential current of 30 mA). According to IEC 60755, RCDs differ in the type of fault currents they can detect, Type A RCS's are preferred.

- VDE 0660 (protect);
- DIN 17470 Metal-sheathed compressed tubular heaters;
- Tubular heater designs according to DIN 44874 and corresponding VDE guidelines;
- DIN 44875 Electric tubular heaters with metal jacket, guidelines for design and use;
- Claw cable lugs DIN 46225 made of nickel for high temperatures (connection to the tubular heater);
- EN 61000-3-3:2013 Electromagnetic compatibility (EMC) — Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage power supply systems for equipment with a rated current ≤ 16 A per phase, not requiring special connection;
- Safety of household and similar electrical appliances. Special requirements for grills, DIN EN 60335-1 (VDE 0700 Part 1). Final inspection of the tubular heaters;
- Pure nickel crimp cable lug for connecting the nickel wire to the tubular heater connection terminal. The connection terminal of the tubular heater must be manufactured according to DIN 44874;
- Pure nickel wire between relay and tubular heater connection, nickel wire according to DIN.....
- Glass fiber impregnated hose;
- DIN 57100 part 523/VDE 0100 part 523.6-81 current load on insulated cables;
- The wiring work is carried out by a qualified electrician in compliance with the standards EN 60204-1 (electrical equipment of machines) and 60519-1 (safety in electric heating systems, part 1 general requirements);
- DIN VDE 0100-100 stripping of plastic hose lines;
- DIN VDE 0100;
- Harmonized cables and wires according to DIN VDE 282/DIN VDE 292;
- DIN EN 60309 Plugs, sockets and couplings for industrial applications