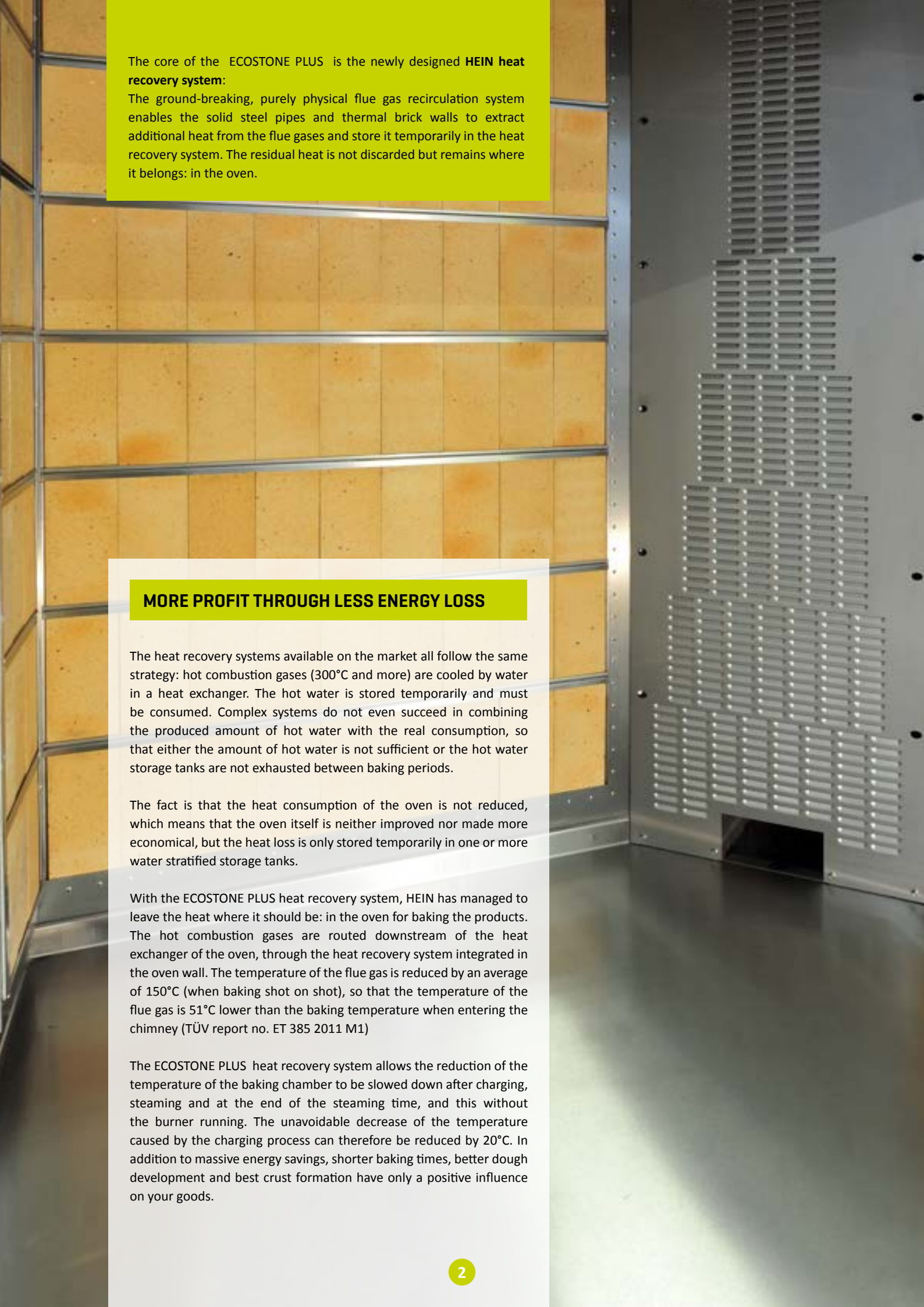
ECOSTONE PLUS

HEIN

MORE ECONOMICAL, EFFICIENT AND POWERFUL
DUE TO THE INTEGRATED HEAT RECOVERY AND THERMAL STONE WALLS.

The heat stays inside!

EN



The core of the ECOSTONE PLUS is the newly designed **HEIN heat recovery system**:
The ground-breaking, purely physical flue gas recirculation system enables the solid steel pipes and thermal brick walls to extract additional heat from the flue gases and store it temporarily in the heat recovery system. The residual heat is not discarded but remains where it belongs: in the oven.

MORE PROFIT THROUGH LESS ENERGY LOSS

The heat recovery systems available on the market all follow the same strategy: hot combustion gases (300°C and more) are cooled by water in a heat exchanger. The hot water is stored temporarily and must be consumed. Complex systems do not even succeed in combining the produced amount of hot water with the real consumption, so that either the amount of hot water is not sufficient or the hot water storage tanks are not exhausted between baking periods.

The fact is that the heat consumption of the oven is not reduced, which means that the oven itself is neither improved nor made more economical, but the heat loss is only stored temporarily in one or more water stratified storage tanks.

With the ECOSTONE PLUS heat recovery system, HEIN has managed to leave the heat where it should be: in the oven for baking the products. The hot combustion gases are routed downstream of the heat exchanger of the oven, through the heat recovery system integrated in the oven wall. The temperature of the flue gas is reduced by an average of 150°C (when baking shot on shot), so that the temperature of the flue gas is 51°C lower than the baking temperature when entering the chimney (TÜV report no. ET 385 2011 M1)

The ECOSTONE PLUS heat recovery system allows the reduction of the temperature of the baking chamber to be slowed down after charging, steaming and at the end of the steaming time, and this without the burner running. The unavoidable decrease of the temperature caused by the charging process can therefore be reduced by 20°C. In addition to massive energy savings, shorter baking times, better dough development and best crust formation have only a positive influence on your goods.

More economical, efficient and powerful

20 % ENERGY SAVINGS*

FLUE GAS TEMPERATURE*

-51°C

BELOW THE BAKING TEMPERATURE

(Measured and confirmed by the German TÜV)

CONNECTION VALUE*

-10 %

BAKING TEMPERATURE*

-10°C

WITH THE SAME BAKING RESULT

THERMOGLAS*

-25 %

HEAT DISSIPATION

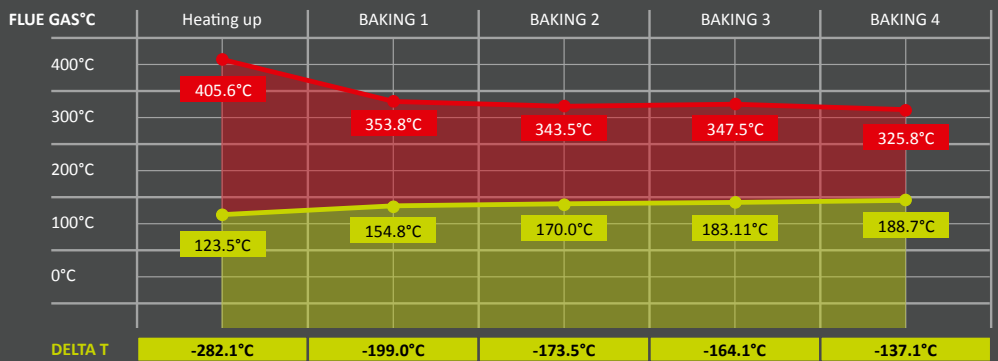
BAKING TIME*

-5 %

WITH FIRST-CLASS BAKING RESULT

*Comparison measurement between **LUXROTOR LR 86-H** and **ECOSTONE PLUS 86-H**

Average flue gas temperatures during heat-up and 4x baking “shot on shot”



THE HEAT RECOVERY SYSTEM

The energy recovered from the flue gases is not only stored in the heat recovery mass but also in the thermal stone walls. When the baking chamber temperature drops, the heat recovery and thermal brick walls release the stored heat, completely autonomously and without extensive control.

The heat that escapes during loading/unloading and baking is replaced more quickly, thus slowing down the usual temperature drop: the oven temperature drops by an average of 20°C less, which has a positive impact on baking quality. Here, a strong heat accumulator with energy recovery system of at least 200 kg is available.

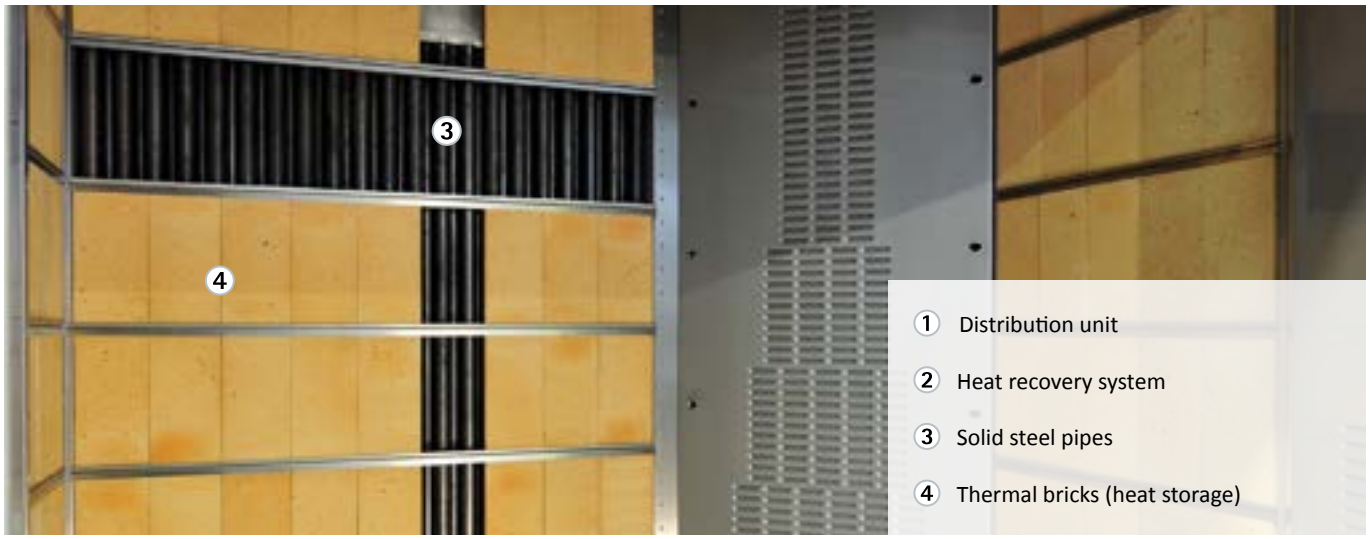
A shorter burner running time of about 5% and a lower connection value of 10% compared to a normal rack oven will accordingly reduce energy consumption by up to 20%.

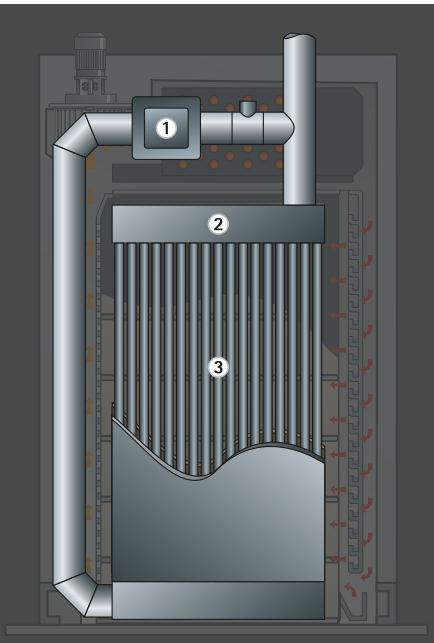
Unlike other heat recovery systems, the ECOSTONE PLUS is purely mechanical and is based exclusively on heat radiation, whereby the heat is transported from the higher energy level (with higher temperature) to the lower level (with lower temperature). When the temperature is compensated, this purely physical process stops.

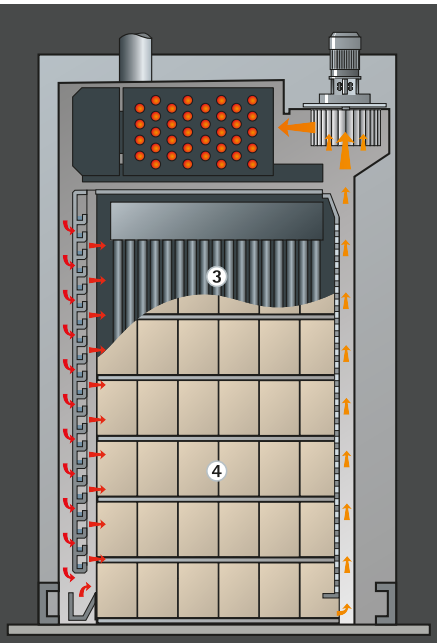
The total mass of the ECOSTONE PLUS heat recovery system, made of heavy steel tubes, in combination with the 200 kg thermal bricks, guarantees an efficient heat storage in the oven. The heat temporarily stored in this manner can be used again and again for baking. After each post-heating of the burner, the heat accumulator is reheated by cooling the flue gases.

In order to reduce the heat loss of the hot heat exchanger and the hot heat recovery during the burner pauses, both the burner flap as well as the electrically controlled chimney flap (HEATBLOCK) close after the end of the programmable burner post-ventilation.

When the flaps are closed, the heat exchanger and the heat recovery system are “sealed off” and the natural chimney draft is interrupted. In this way, this heat loss is also prevented right at the source, with a minimum of effort.







THE DESIGN

The HEIN ECOSTONE PLUS is delivered with head suspension or rotary plate as desired. It can accommodate all models of other baking trolley manufacturers. HEIN will build the oven around your existing racks if the baking trolley is available. The inclined roller track of the head suspension allows the baking trolley to be inserted without a ramp; during baking, the rack wheels have no contact with the oven base. With recessed mounting, baking without ramp is also possible with the rotary plate.

The HEIN ECOSTONE PLUS bakes your products on a rotating baking trolley (head suspension or rotary plate) in a constant air flow regulated by SOFTAIR. The SOFTAIR control allows the infinitely adjustable regulation of the air flow between 60% and 100%. These settings can be stored in the individual baking programs.

The perfectly dosed air volume will bake your finest baked goods gently and carefully. The HEIN ECOSTONE PLUS can be optionally equipped with the preserving, frequency-controlled “soft” start (SOFTSTART).

The heat recovery system integrated in the rear wall of the oven and the thermal brick walls ensure that the temperature drops less after loading/unloading, during steaming and the steaming exposure time, even though the air circulation and the burner are not running. The solid door system (HEIN lifting/lowering mechanism), which has been tried and tested for decades, closes the baking chamber steam-tight.

Steam and heat therefore remain where they belong. The steam-tight door thus also prevents discoloration above the oven door caused by steam escaping.

Baking chamber with rotary plate

Baking chamber with head suspension

THE CONTROL TECHNOLOGY

The newly developed touchscreen controllers in 7” or 10” are equipped with heat-resistant electronics that can withstand temperatures of up to 60°C. The circuit boards are sealed to protect the electronic components from environmental influences and equipped with a brilliant display with a resolution of 800x480 pixels made of real glass and LED background lighting.

The control system allows intuitive baking with stored baking programs that can be distinguished by pictograms, but also sensitive manual juggling with the various parameters. With 200 baking programs, the touchscreen control leaves nothing to be desired.

The ECO button allows the oven to drop to a pre-programmed temperature during extended baking breaks. This prevents unnecessary maintenance of the baking temperature.

Thanks to the reduced burning time and the excellent thermal insulation of the oven, energy is once again noticeably saved. Any breakdowns are signaled and the causes can be easily called up via the display. This makes it easier to forward the breakdown message to HEIN customer service and thus speeds up targeted repairs.

The technology enthusiast baker will find temperature records in bar or curve diagrams, baking process data that can be called up at any time, protocols of possible baking errors, deviations from the program or hardware problems as well as automated display of regular maintenance deployments.

With the “HEIN-LINK” software, all controllers can be connected to each other and to your PC and thus data can be transferred directly.

TECHNICAL DATA OF THE ECOSTONE PLUS RACK OVEN FOR ONE BAKING TROLLEY

Baking area from 4.3 to 16 m² on an area of 1.0 to 2.9 m²

MODELL	Heat exchanger	Quantity (max.) / sheet metal plate dimensions (cm)	Usable baking area (max m²)	Outer dimensions (D x W x H cm)	Min. compartment height (cm)	Connection value (kW)	Electrical power (kW)	Vapor trap (ø mm)	Flue gas (mm ø)
LR-66	top	16 (60x60)	**5.8**	145x133x230	250	**46**	3.5	150	180
LR-66-H	top	20 (60x60)	**7.2**	145x133x260	280	**54**	3.5	150	180
LR-86	top	16 (80x60)	**7.7**	158x155x230	250	**54**	3.5	150	180
LR-86-H	top	20 (80x60)	**9.6**	158x155x260	280	**68**	3.5	150	180
LR-106-H	top	20 (100x60)	**12**	175x168x260	280	**76**	3.5	150	180
LR-108-H	top	20 (100x80)	**16**	178x184x260	280	**82**	3.5	150	180

TECHNICAL DATA OF THE ECOSTONE PLUS RACK OVEN FOR TWO BAKING TROLLEYS

Baking area from 19.2 to 32 m² on an area of 4.2 to 5.3 m²

Compared to two single racks positioned next to each other, this results in a space saving of ± 1m in width, a ± 25% lower investment and a ± 20% lower connection value.

MODELL	Heat exchanger	Quantity (max.) / sheet metal plate dimensions (cm)	Usable baking area (max m²)	Outer dimensions (D x W x H cm)	Min. compartment height (cm)	Connection value (kW)	Electrical power (kW)	Vapor trap (ø mm)	Flue gas (mm ø)
LR-812-H	top	2x20 (80x60)	**19.2**	216x215x273	300	**120**	5.0	180	180
LR-1012-H	top	2x20 (100x60)	**24**	232x227x273	300	**135**	5.0	180	180
LR-1016-H	top	2x20 (100x80)	**32**	240x243x273	300	**140**	5.0	150	180

SEVERAL REMARKABLE EQUIPMENT FEATURES

1 LARGE DISPLAY

Displays the current temperature in the baking chamber and the remaining baking time. Good luminosity and easy to read regardless of the viewing angle. Saves having to go back to the oven to read the remaining baking time.

2 GLOVE COMPARTMENT

Rack ovens do not have a table, so the baker sticks his gloves behind the oven door handle. Impractical, time-consuming as well as unreliable. From now on, there is a compartment for the baker's gloves in the front left corner of the hood. Due to the perforated stainless steel plate, the heated and damp gloves can dry between the work processes. The glove compartment can be easily unhooked for cleaning.

3 MFL - LAMP (MULTIFUNCTION LAMP)

Indicates the current status of the oven:

Red = Door is open when the baking program is running / general error
Yellow = Lights up when baking is finished (in conjunction with acoustic signal)
Green = Oven is ready for baking (set baking temperature reached)

EXTRACTOR HOOD WITH EXTERNAL MOTOR

The background noise in a bakery can be very annoying. In order not to increase the noise level unnecessarily, HEIN supplies the extractor hood with an external pipe fan, which should be mounted as far away from the exhaust air pipe as possible. This reduces the main noise source of the extractor hood significantly.

BAKER'S KNIFE HOLDER

After the cutting process, the baker at the rack oven does not know where to put the knife. For this reason, the ECOSTONE PLUS comes with a magnetic blade holder as standard. Made of stainless steel, easy to clean and safe because the blade is covered on the side.

PROTECTIVE BAR

The high stability and shock resistance of the latest generation touch screen surfaces could still be exceeded. That is why the new ECOSTONE PLUS touch screen is equipped with this protective bar as standard.

IMPACT BAR

If a baking tray is not correctly inserted into the oven rack during loading, it can change the slot setting and thus the baking results when it comes into contact with the slotted wall. A vertical stainless steel protective bar is fitted to the slotted wall as standard (on the left). Any overhanging baking trays will bump against it and the rack will be stopped by the sliding clutch. This prevents accidental contact with and adjustment of the air outlet slots.

THE BENEFITS OF THE ECOSTONE PLUS SERIES AT A GLANCE

- ALL IN ONE = Rack oven with integrated heat recovery.
- No additional craftsmen for assembly.
- No power consumption due to heat recovery as it is 100%. mechanical.
- No connection to building services / central heating - no external heat storage.
- Self-regulating without complex control technology, monitoring or programming.
- Heat recovery completely maintenance-free.
- Recovery with every burner run (when baking shot on shot).
- Long service life identical to that of the heat exchanger.
- Energy consumption reduced by 20% (oil / gas).
- Better baking results due to the required baking temperature being reached quicker after loading.
- Additional energy savings due to shorter baking times.
- No idle times (reheating times) when baking shot on shot.
- The heat remains where it is produced and needed for baking: in the oven.

Oven construction and cooling technologies

The HEIN company is an innovative family-owned company from Luxembourg, which has been developing high-quality baking and cooling technology for demanding bakers and manufacturing it in its own production facilities since 1882. Every product that leaves the factory is the result of over 140 years of experience, the highest level of engineering, the best materials and components, the most modern production techniques down to the last detail and the skills of highly motivated and committed employees.









Overview of our product range


UNIVERSAL PLUS


WOODSTONE PLUS
(Classic Design)


ELECTRO
ELECTRO STONE


EUROLUX


ECOSTONE PLUS


THERMO


STONEROLL^2


BAKELUX^3 | CONDILUX^3


TOPLUX


FLEX-UV PLUS


MARYLINE


MODULUX^2


LIFTMASTER


HUBILUX


SPIDER

Redefining excellence. Since 1882.

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