Big Dutchman®

EUROVENT EU

The enriched colony system for layers

EUROVENTEU

reliable, animal-friendly and hygienic egg production

With the **EUROVENTEU** colony system, Big Dutchman provides you with everything you need for animal-friendly and efficient egg production. Two of the most important advantages are maximum hygiene and the best possible product safety. The enriched colony system fully complies with the EU Directive 1999/74/EC of 19 July 1999*. This means the system meets the following requirements:

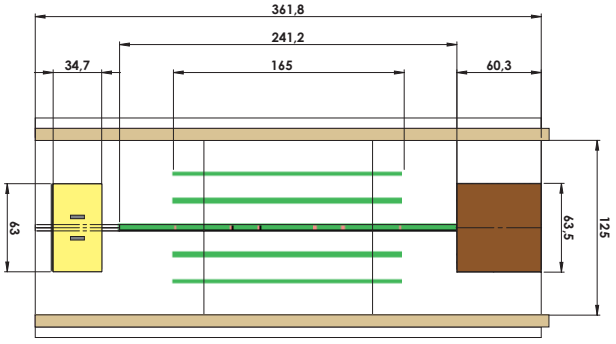
- ✔ at least 750 cm² colony surface area per hen with 600 cm² usable area;
- ✔ the total colony surface area must be no less than 2000 cm²;
- ✔ colony height no less than 45 cm;
- ✔ no less than 12 cm trough length per hen;
- ✔ every hen must have access to at least two nipple drinkers;
- ✔ nest and litter bath must be available;
- ✔ 15 cm perch per hen;
- ✔ every compartment must be equipped with a claw-shortening device;
- ✔ the floor slope must not exceed 14 % or 8°;
- ✔ aisle width of no less than 90 cm;
- ✔ minimum distance of 35 cm between barn floor and bottom tier.

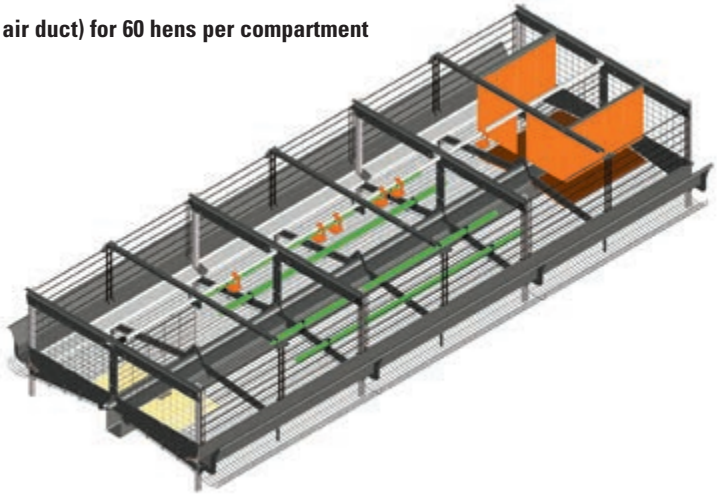
* Different regulations based on other country-specific directives for laying hen management may apply.

Different group sizes: easily realised with EUROVENTEU

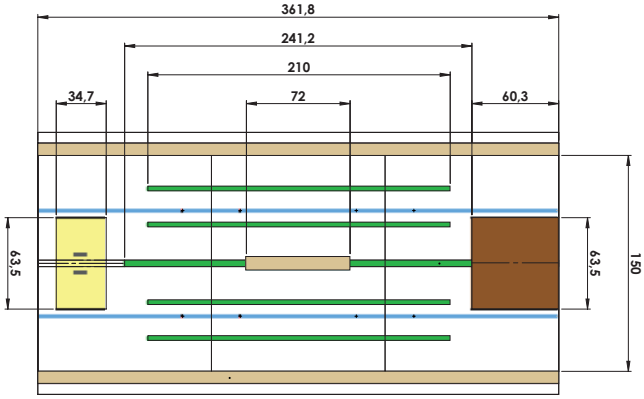
EUROVENTEU is available for different group sizes. Based on the system type, group sizes of 20, 30, 36, 40, 60 or 72 hens per compartment are possible. All variants provide excellent conditions for the hens and ample freedom of movement, thus enabling the hens to act our their natural behaviour. Let our experts advise you on the best solution for you individual requirements.

EV 1250-2-EU / EV 1250a-2-EU (with/without air duct) for 60 hens per compartment





EV 1500-2-EU / EV 1500a-2-EU (with/without air duct) for 72 hens per compartment



Feed trough | Litter mat | Nest mat | Perches | Nest curtain

The advantages at a glance:

- ✔ the proven EUROVENT system is the perfect basis for profitable, high-quality egg production:
  –> mature technology
  –> high laying performance
  –> clean eggs
  –> minimum share of cracked eggs (115 mm egg belt width)
  –> healthy hens, low mortality rate
  –> good feed conversion
- ✔ high functional reliability of all supply and removal systems (feed, water, egg belts, litter, manure removal);
- ✔ rugged design;
- ✔ trouble-free assembly from three to twelve tiers with catwalks;
- ✔ the entire colony front consists of sliding grids that can easily be opened to move the hens in an animal-friendly way;
- ✔ all wire grilles are zinc-aluminium coated for high corrosion protection;
- ✔ the bottom wire grille has a mesh size of 1“x1.5“ and a slope of only 12 % or 7° and rests on tension wires, which ensures excellent egg quality;
- ✔ manure belt ventilation (optional) makes for optimal manure drying that keeps ammonia emissions in the barn to a minimum and produces spreadable and storage-stable dry manure.

Perch area in the EUROVENT-EU for 60 hens per compartment

EUROVENT-EU for 72 hens per compartment with additional central feeding area

Feed and water supply – safe and reliable for every hen

The Big Dutchman chain feeding system is one of the most reliable and cost-effective feeding systems in the world. The chain feeder transports the feed smoothly to the birds without separating the individual ingredients. The deep feed trough has an inward rim that minimises feed wastage. Reinforced or accessible troughs are available as options. The CHAMPION feed chain is moved by just one drive per feed circuit. The advantages:

- ✔ a high degree of efficiency;
- ✔ no additional transfer elements;
- ✔ low maintenance requirements;
- ✔ a space-saving, completely galvanized feed column.

Fresh and clean drinking water is supplied to the hens by means of nipple drinkers. Each compartment is equipped with four, six or eight stainless steel nipples, depending on the group size, to ensure that every hen has easy access to a water source at any time. Drip cups collect splash water to prevent corrosion and help to keep the manure dry.

Nest with curtain and mat insert for undisturbed egg laying

The nest is positioned in the centre of the compartment and separated from the rest of the compartment by means of a flexible curtain. The hens are thus not disturbed when laying their eggs. The entire feed trough is available to the hens for feed intake, i.e. no valuable feeding space is lost. The length of the individual curtain strips has been selected in such a way that the nest can easily be monitored by the farm staff.
Additionally, the strips can be moved, which means that mites are not attracted to this area.
In the nest, a dividing mesh is fixed above the spiral tube that runs the full length of the system to stop perching. This keeps the nest mat clean. The nest mat is completely perforated to further enhance its self-cleaning abilities.
To facilitate the cleaning process after each batch, the nest mat can easily be removed and re-inserted into the nest, simply by hooking it into the bottom wire grille. The litter mat is fixed in the same manner.

EggSaver – for safe rolling off of eggs onto the longitudinal egg belt

EggSaver in lowered position –> the eggs are slowed down carefully

The EggSaver slows down the eggs when they roll from the nest onto the longitudinal egg belt (115 mm width). This is accomplished by means of a thin wire installed parallel to the egg belt. This wire is raised and lowered at certain intervals during the laying period. An additional advantage of the EggSaver is that the freshly laid, still moist eggs can dry off before they roll onto the longitudinal belt, thus minimising the amount of dust and feathers sticking to the eggs.

EggSaver in raised position –> the eggs can roll onto the longitudinal egg belt

WIN4 – for safe transportation of the eggs on the longitudinal belt

The **WIN4** computer (optional), developed by Big Dutchman, ensures that the eggs do not pile up between the nest and the egg belt during the main laying phase. The computer therefore helps to maintain the desired quality standard. This is accomplished by weighing the egg channel at two neutral locations inside the barn directly in the nest area, on both sides of the compartment's nest. When a defined egg weight is reached, the load cell transmits a signal to the computer which then issues a command to pull forward the longitudinal belt. This minimises the share of cracked and hairline-cracked eggs and guarantees a uniform utilisation of the entire egg collection system.

Scratching area with innovative Wellix litter mat

The Wellix insert used in the scratching area is a completely new development and has several innovative advantages:

- ✔ compared to the nest mat, the litter mat is of a lighter colour to prevent confusion with the nest;
- ✔ a wave-like profile keeps the litter longer on the mat;
- ✔ the profile of the mat loses some depth towards the trough so mislaid eggs can roll off more easily;
- ✔ thanks to the serrated profile edge, mislaid eggs have only minimal surface contact, i.e. very low dirt risk;
- ✔ high-quality materials guarantee a long service life;
- ✔ the integrated claw shortener is ideally positioned and perfectly efficient because all hens frequent the litter mat.

Litter is supplied automatically by means of a conveyor pipe with spiral that runs through all compartments in longitudinal direction. This conveyor pipe also serves as perch in all areas of the compartment except for the litter area, where it is protected by means of a separating wire mesh. This keeps the litter mat clean. Feed is the best litter medium as it is readily available and can be ingested by the hens without problem.

Correct illumination for optimum light distribution inside the barn

The lights should always be installed close to the litter area. The nest area should not be illuminated so as not to disturb the hens during the laying period. Apart from using light tubes, we recommend our innovative and energy-efficient LED tube lamp FlexLED. Both can be dimmed and suspended vertically from the ceiling of the aisles.

Depending on the group size, one lamp should be installed every 4.80 m (for 20 or 40 hens per group) or every 7.20 m (for 30, 36, 60 or 72 hens per group). These figures are based on the layout of the compartment, which is always nest to nest and scratching area to scratching area. During inspection works, the lamps can simply be pulled up under the ceiling.

High corrosion protection

Excellent product quality and reliability are part of our company philosophy. For this reason all installed wire grilles are zinc-aluminium coated. This special alloy resists corrosion and rust more effectively than other materials, thus guaranteeing a longer service life.

amacs – the ideal management system for your house

With amacs you are able to manage and monitor one or several houses from any place in the world in real time by means of internet technology. Based on your requirements, up to four functional areas can be controlled – climate, production, egg collection and manure drying. amacs is a modular system and can therefore be extended at any time.
All data and results from the individual houses are displayed in graphs, and live pictures are transmitted directly from the house: further advantages of amacs.

The farm manager monitors the entire system at the farm controller – any changes are immediately put into effect in the barn

Additional touch screen in the control cabinet

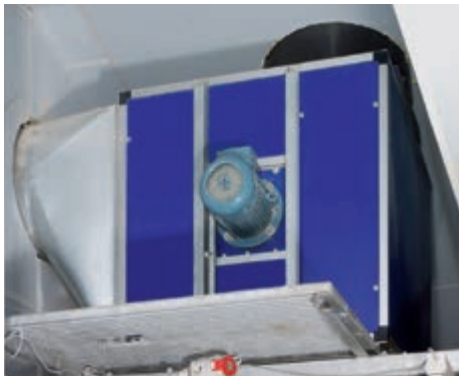
Manure drying and manure removal by means of manure belts – simple, clean and efficient

The optional manure belt ventilation helps to reduce the ammonia concentration in the house air significantly. With the air duct, the manure is dried quickly and efficiently. This means:

- ✔ dry matter contents of up to 60 percent;
- ✔ no problems with flies in the barn.

Additionally, the air duct supplies the hens with fresh air.
An air mixer permits the realisation of an ideal basic ventilation at any time of the year. Based on the temperature requirements, the house can be ventilated by fresh air, mixed air or recirculating air. We recommend operating with an air rate of approx. 0.7 m^3 per hour and per bird. Energy consumption will be only 2 kWh per bird per year. As an alternative, it is also possible to install the radial fans R3G 400 to R3G 560 with an air rate of 5,000 to 13,000 m^3/h. These fans have an especially compact design and are installed directly above the end set in each row. If they are used, horizontal distributing pipes are no longer needed. In addition to using recirculating fans exclusively, it is also possible to equip every R3G radial fan with a fresh air chimney in order to mix fresh air and house air. This permits combining the advantages of a compact radial fan with those of an air mixer in an ideal way.

For optimum manure drying results, the system should be installed in a well-insulated building with a high stocking density and optimum ventilation conditions.
Polypropylene (PP) manure belts beneath the bottom wire grilles collect the manure which can remain there for up to seven days.



Air mixer – economic heating of the house air

Radial fan R3G 400 per system row

End set manure removal

During manure removal, the longitudinal manure belts carry the manure until it is dropped onto the cross belt from all tiers. From there, it can be transported either to a manure drying tunnel or directly onto a transport vehicle.
Manure belt scrapers ensure the thorough cleaning of the belts on every tier. The manure chute, made of a plastic tarp and installed in front of the manure belt drive, neatly closes the system in the manure removal area.


OptiSec manure drying tunnel

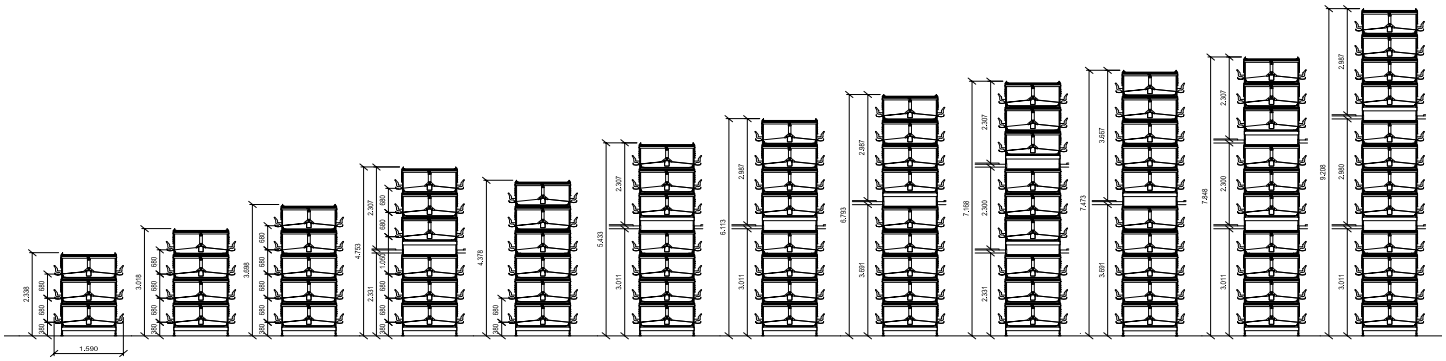

Dry manure storage

Technical data and planning instructions

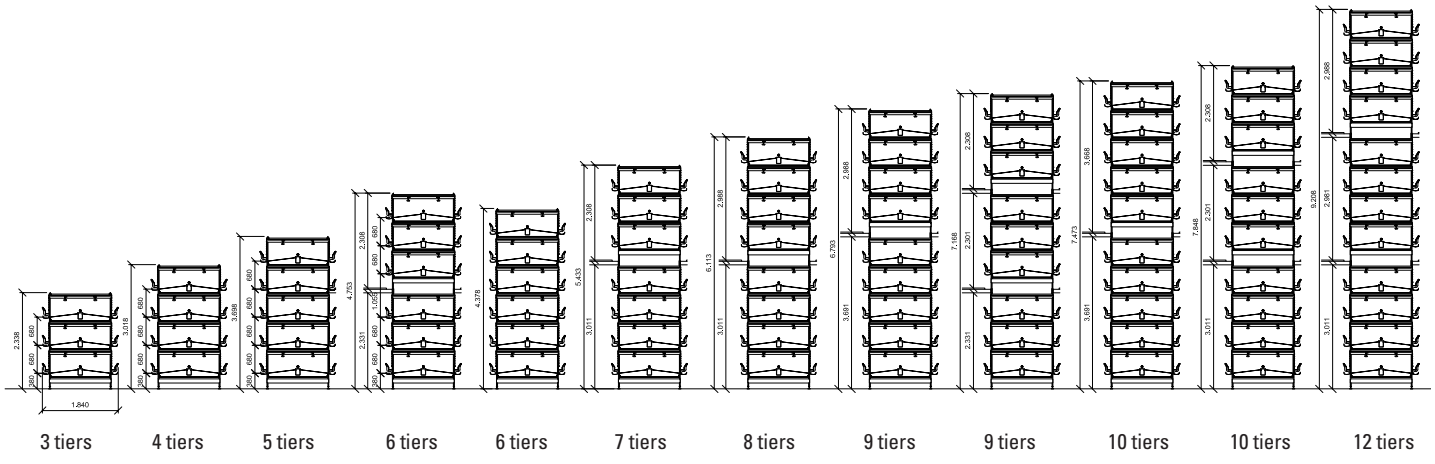
The EV1250/a and EV1500/a system types have the same compartment length of 3618 mm in the standard version but differ from each other in width and height. In the case of existing houses it might be an advantage to combine both system types in order to utilise the building width in an ideal way.

System heights with and without catwalks

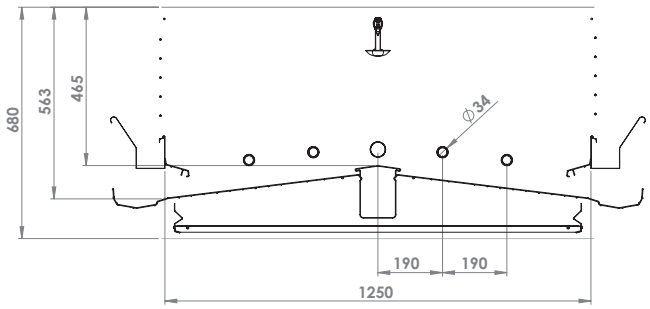
EV 1250-2-EU / EV 1250a-2-EU



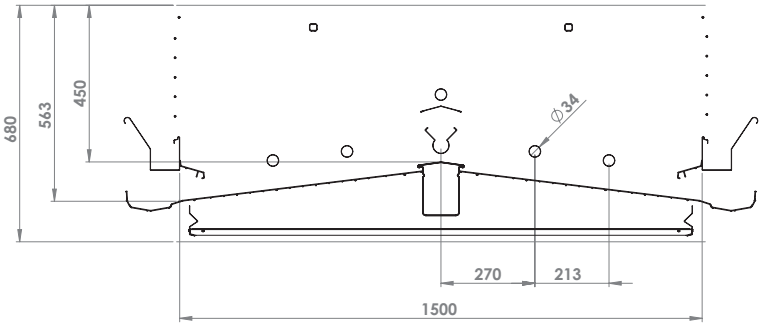
EV 1500-2-EU / EV 1500a-2-EU



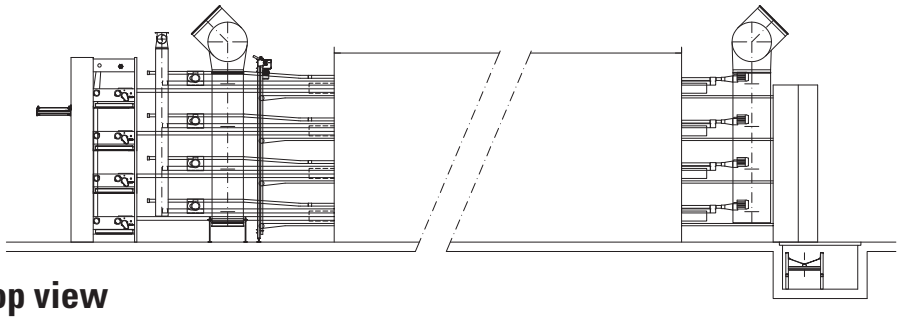
Compartment dimensions: EV 1250-2-EU60/EV 1250-2a-EU60



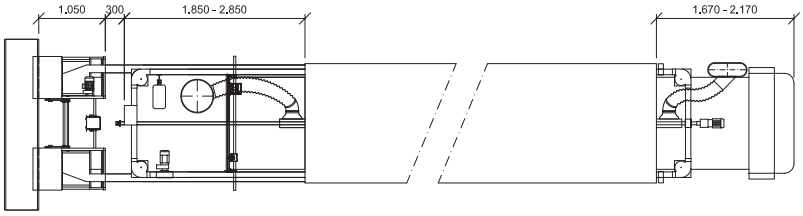
EV 1500-2-EU72/EV 1500a-2-EU72



Side view



Top view



Type	EV 1250-2-EU60 EV 1250a-2-EU60	EV 1500-2-EU72 EV 1500a-2-EU72
Compartment dimensions		
Length (mm)	3618	3618
Depth (mm)	1250	1500
Height (mm)	450-548	450-562
Surface area in the bird area (cm²)	45225	54270
Hens/compartment (750 cm²/hen)	60	72
Trough length / hen (cm)	12	12
Perch length / hen (cm)	15	15

Inspection cart – easy inspection of the hens

The Big Dutchman inspection cart ensures an optimal monitoring of the hen population. It furthermore facilitates moving hens in and out of the upper tiers. The height of the inspection cart can be adjusted as required. The cart runs both on the accessible feed trough and on the barn floor. It can be locked in place in any position by means of a brake.

Our recommendation

An ideal combination of the individual elements of a layer house project – manure belt system, egg collection, climate and production control as well as manure handling – is the best prerequisite for optimum production results.

Let our experts advise you on all the options Big Dutchman can offer you for successful egg production.

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