The enriched colony system for layers
EUROVENT EU
reliable, animal-friendly and hygienic egg production

With the EUROVENT EU 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 of 19 July 1999.*

This means:

- ✔️ at least 750 cm² colony surface per hen, with 600 cm² usable area;
- ✔️ the total colony surface must have at least 2000 cm²;
- ✔️ colony height at least 45 cm;
- ✔️ at least 12 cm trough length / hen;
- ✔️ every hen must have access to at least 2 nipple drinkers;
- ✔️ nest and litter bath must be available;
- ✔️ 15 cm perch per hen;
- ✔️ every colony compartment has to be equipped with a claw-shortening device;
- ✔️ the floor slope must not exceed 14 % or 8°;
- ✔️ passage width of at least 90 cm;
- ✔️ distance of at least 35 cm between the barn floor and the bottom tier.

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

Different group sizes are no problem with EUROVENT EU

EUROVENT EU 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 out their natural behaviour. Let our experts advise you on the best solution for you individual requirements.

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

EV 1500-EU/EV 1500a-EU (without/with 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:
  ➔ sophisticated 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 3 to 12 tiers with intermediate ceilings;

☑️ the sliding front can easily be opened for animal-friendly moving in and out of the hens;

☑️ zinc-aluminium coated grates provide a high corrosion protection;

☑️ the bottom grate has a mesh size of 1”x1.5” and an inclination of just 12 % i.e. 7° and rests on tension wires;

☑️ manure belt ventilation (optional) makes for optimal manure drying which keeps ammonia emissions in the barn to a minimum and produces spreadable, storage-stable dry manure.

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. It transports the feed to the birds smoothly and without separation. The deep feed trough with inward rim minimizes feed wastage. Optionally available is a reinforced or accessible trough. The CHAMPION feed chain is moved by means of one drive per feed circuit only. Its advantages:

☑️ a high degree of efficiency;

☑️ no additional transfer elements needed;

☑️ low maintenance requirements;

☑️ 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 4, 6 or 8 stainless steel nipples to ensure that every hen has easy access to a water source at any time. Drip water cups collect splash water to prevent corrosion and help to keep the manure dry.
Nest with curtain and insert for undisturbed egg laying

The nest is separated from the rest of the compartment by means of a flexible curtain. This means the hens will not be disturbed when laying their eggs. No feed space is lost as the trough is in front of the nest but is far enough forward not to allow the birds to fowl the nest. This means 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. The mobility of the individual strips also provides a good protection against mites. The spiral tube which runs the full length of the system has a dividing mesh fixed above it in the nest area. This stops perching and ensures less fowling of the nest. The nest insert is completely perforated to further enhance its self-cleaning abilities.

To facilitate the cleaning process after each batch, the nest insert can easily be removed and inserted in the nest by simply hooking it into the bottom grate. The litter mat is fixed in the same manner.

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

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 fresh, still moist eggs can dry off before they reach the egg belt which will minimise the amount of dust and feathers sticking to the eggs.

WIN 4 – for a safe transport of the eggs on the longitudinal belt

The WIN 4 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 and therefore helps to maintain a certain quality standard. This is accomplished by weighing the egg channel at two neutral locations inside the barn directly in the nest area from both sides of the nest. If 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 – thus minimising the share of cracked and hairline-cracked eggs and ensuring an optimal utilisation of the entire egg collection.
Scratching area with innovative litter mat Wellix

The Wellix insert used in the scratching area is a completely new development and has several innovative advantages:
- ✓ compared to the nest insert it is of a lighter colour → no confusion with the nest;
- ✓ wavelike profile → the litter stays on the mat much longer;
- ✓ in the direction of the trough, the profile of the mat is less deep → mislaid eggs roll off easily;
- ✓ serrated profile edge → mislaid eggs have only minimal surface contact, i.e. very low dirt risk;
- ✓ high-quality material → long service life;
- ✓ integrated claw shortener → ideally positioned and very effective as all hens will frequent the litter mat.

Litter is supplied automatically by means of a conveyor pipe with spiral which runs in longitudinal direction through all compartments. The conveyor pipe also serves as perch in all areas of the compartment except for the litter area and nest 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 as not to disturb the hens during the laying period.

We recommend installing tube lamps that can be suspended vertically in the aisle. The lamps can be additionally equipped with a reflector to increase the efficiency.

Depending on the group size, one lamp should be installed every 4.8 m (for 20 or 40 hens/group) or every 7.2 m (for 30, 36, 60 or 72 hens/group). These measurements are the result of the arrangement of the compartment which is always nest to nest and scratching area to scratching area. During inspection works, the tube 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 grates are zinc-aluminium coated. This coating has special properties which ensure a significantly better corrosion protection and therefore a longer service life.
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. The barn-customised visualisation of all data results in graphical illustrations as well as the transmission of live pictures directly from the barn are further advantages.

The farm manager monitors the entire system at the farm controller – any changes are directly activated in the barn.

Additional touch display in the control cabinet

Manure drying and belt manure removal – simple, clean and efficient

With the ventilated EUROVENTEU the ammonia concentration in the house air can be significantly reduced. By means of the air duct, the manure is quickly and efficiently dried. This means:

✔ dry matter content of up to 60 %;
✔ no problems with flies in the barn.

The hens are additionally supplied with fresh air by means of the air duct. An air mixer permits the realisation of an ideal basic ventilation at any time of the year. Based on the temperature requirements the house is supplied with fresh air, mixed air or circulating air. We recommend operating with an air rate of approx. 0.7 m³/h and per bird. This means, only 2 kWh/bird/year of energy are required.

As an alternative it is also possible to install radial fans R3G 400 to R3G 560 with a capacity of 5000 to 13000 m³/h. They have an especially compact design and are installed directly above the end set in each row. In this case, horizontal distributing pipes are no longer needed. In addition to installing a circulating air fan only, it is also possible to equip every radial fan R3G 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.

The important factors for good manure drying are a well-insulated building, a high stocking density and optimum ventilation conditions. Polypropylene (PP) manure belts beneath the bottom grates collect the manure. There, it can be stored for an interim period of up to 7 days.
During manure removal, the manure is carried via the longitudinal manure belts and is dropped down onto the cross belt from all tiers. From there, it can be transported either to a manure drying tunnel or directly onto a truck. Centrally activated (optionally) manure belt scrapers ensure the thorough cleaning of the belts on every tier. The manure chute with a plastic curtain in front of the manure belt drive, neatly closes the system in the area of manure removal.

**Technical data and planning instructions**

The system types EV1250/a and EV1500/a 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 optimally utilise the building width.

**System heights with and without intermediate ceiling**

**EV 1250/a-EU**

**EV 1500/a-EU**
Compartment dimensions:  

**Side view**

**Top view**

**Inspection cart – easy inspection of the hens**

The inspection cart from Big Dutchman ensures an optimal monitoring of the hen population. Furthermore it facilitates moving hens in and out of the upper tiers. The inspection cart can be variably adjusted in its height and runs on the accessible feed trough and on the barn floor. It can be secured in any position by means of a break.

**Compartment dimensions**

<table>
<thead>
<tr>
<th>Type</th>
<th>EV 1250-EU60</th>
<th>EV 1500-EU72</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EV 1250a-EU60</strong></td>
<td>EV 1500a-EU72</td>
<td></td>
</tr>
<tr>
<td>Length (mm)</td>
<td>3618</td>
<td>3618</td>
</tr>
<tr>
<td>Depth (mm)</td>
<td>1250</td>
<td>1500</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>450-548</td>
<td>450-562</td>
</tr>
<tr>
<td>Surface area in the animal area (cm²)</td>
<td>45225</td>
<td>54270</td>
</tr>
<tr>
<td>Hens/compartment (750 cm²/hen)</td>
<td>60</td>
<td>72</td>
</tr>
<tr>
<td>Trough length/hen (cm)</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Perch length/hen (cm)</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

We recommend

An ideal combination of the individual elements of a layer house – 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 to find the best solution for your individual requirements for successful egg production.