



Big Dutchman®



NATURA Step XL

The animal-friendly aviary system for egg production
with a large usable area

NATURA Step XL

The stepped aviary with a large usable area

With **NATURA Step XL**, Big Dutchman can offer customers a new cage-free system based on the benefits of the NATURA Step aviary, which is used very successfully worldwide.

NATURA Step XL is an aviary system that is focused on the welfare of the birds, without

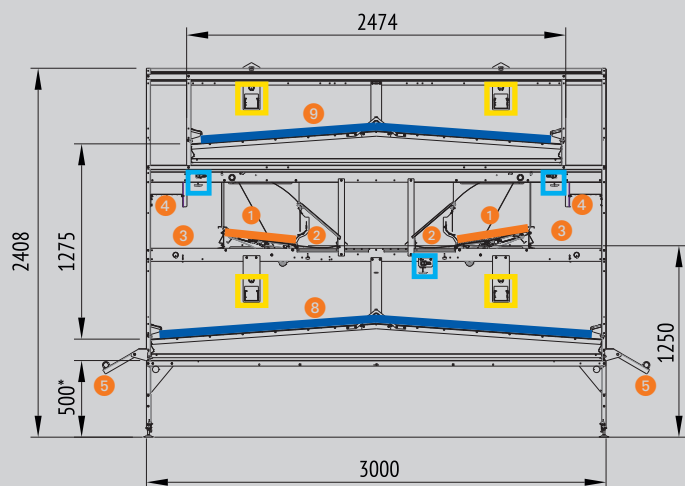
disregarding functionality and efficiency, which are very important to egg producers. The layers can exhibit their natural behaviours in a system whose functional structure is easy to understand, and they lay their eggs under hygienic conditions in a well-designed nest.

NATURA Step XL is a very versatile system

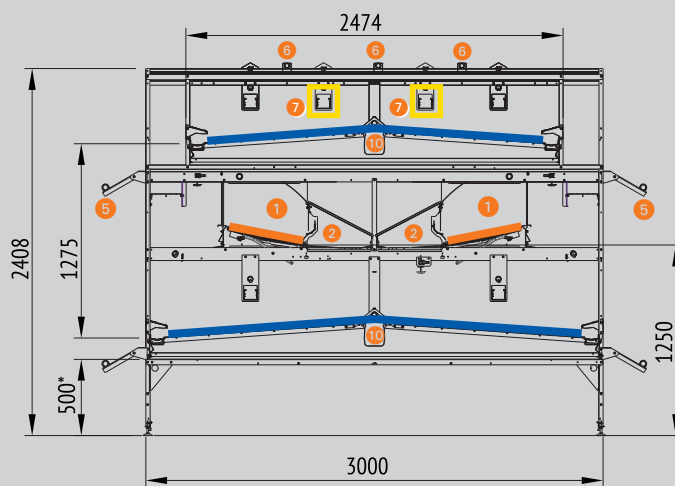
and can be used in barn and free range egg production, for traditional and organic egg production, and in large as well as smaller houses. It is therefore always the right concept for animal-friendly and successful egg production.

Cross section and arrangement of the individual elements

NATURA Step 30-24
Standard



NATURA Step 30-24
Possible options



Key

- | | | |
|--|-----------------------------------|------------------------------------|
| 1 Two nests, either Colony 2+ or Colony HD | 4 Integrated "hop and turn" plate | 7 Additional feed lines (optional) |
| 2 Two divided egg belts, 245, 400 or 450 mm wide | 5 Approach perch | 8 Manure belt level 1 |
| 3 Wire flooring in front of the nest with approach perch | 6 Additional perches (optional) | 9 Manure belt level 2 |
| | | 10 Air duct (optional) |

The different areas of activity are arranged in a way that animates the hens to move around in the system.

- Nest surface area
- Water
- Feed
- Usable area

All dimensions in mm

Important features of NATURA Step XL

- ✓ tiers of different widths create a stepped design in which all three levels are easy to reach, especially the integrated nest level;
- ✓ both the staff and the birds can easily access the aviary, nest inspection is made simple;
- ✓ nipple drinkers directly in front of the nest increase nest acceptance;
- ✓ the separate nest level has two divided nest rows, either with the integrated Colony 2+ nest or the 8 cm deeper HD version;
- ✓ the required nest surface area can be adjusted to meet the stocking density by combining sections with nest and sections with passage;
- ✓ the nest's back wall and the egg channel cover form a unit so that the eggs are well protected against dust;
- ✓ the back wall can be disengaged at the nest entrance for thorough cleaning of the nest after the batch;
- ✓ eggs mislaid in the system (system eggs) can be collected automatically (optional);
- ✓ the very large usable area ensures very good utilisation of the house surface;
- ✓ the standard version comes with four feed lines, which can be increased to six as an option;
- ✓ five additional perches for the top tier can be supplied optionally;
- ✓ the standard height under the system is 500 mm, 650 mm are possible as an option;
- ✓ the entire house floor surface is used as a scratching area;
- ✓ two manure belt levels guarantee that most of the manure is transported out of the barn, decreasing the ammonia content in the air and improving hygienic conditions;
- ✓ the aviary is fully functional even as single row;
- ✓ a version with extra large air duct is optionally available.



Resting zone

The top level is used as a resting zone. Equipped with both feed lines and perches, it is possible to install additional feed lines as an option, depending on the stocking density. The accumulating manure drops onto the manure belt below and can be dried by means of an optional central air duct that is especially large.



Colony 2+ or Colony HD

Our colony nests guarantee good results due to high nest acceptance and a low number of dirty and cracked eggs. Both nests are integrated into NATURA Step XL. They are easy to enter, have a soft insert and a divided tilting floor. Before this tilting floor closes the nest at night, all eggs roll off backwards onto the egg belt. The hens cannot sleep in the nest, which prevents soiling and increases nest hygiene.



Lower tier

The lower tier is equipped with two feed lines and a drinker line. The hens can eat without being disturbed. Two FlexLED tube lamps light the tier, providing even and flicker-free illumination.

The accumulating manure drops onto the manure belt below and can be dried by means of an optional, especially large, air duct that is installed in the centre.

Sheet metal perches, optionally made of stainless steel, guarantee a secure foothold for the birds.



Scratching area

The hens can use the entire house floor as a scratching area. The area is lit by two FlexLED tube lamps with even, flicker-free light. Hens therefore lose interest in laying their eggs here.

Our litter reduction system removes manure and excess litter automatically, if desired, which helps reduce dust.



Two divided longitudinal egg belts transport the eggs securely

One egg belt per nest

NATURA Step XL has longitudinal egg belts with round holes. These belts are easily able to withstand high tensile loads. The nest's back wall, which also functions as an egg channel cover, protects the eggs against dust and any dirt from the returning manure belt. A special gap allows the hens to poke their heads out of the nest should it become overcrowded.



Reinforced egg belt drive

EggTrax for divided egg belt

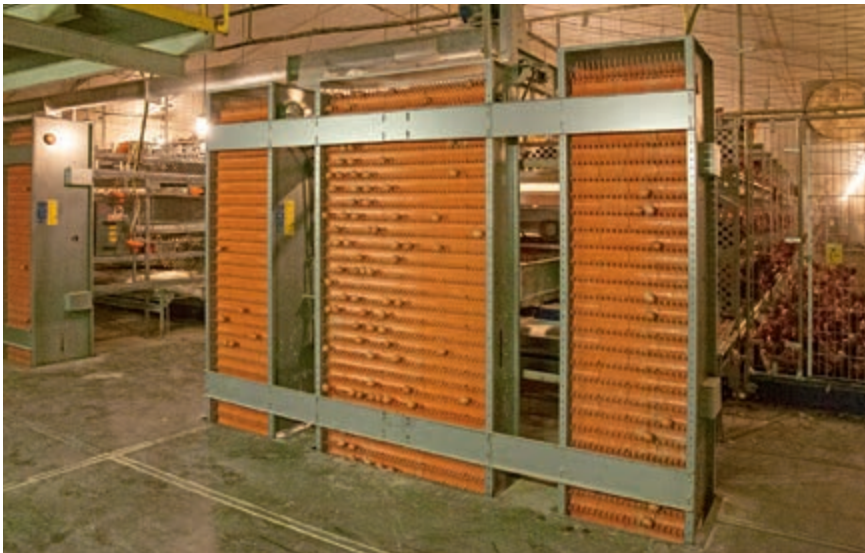
The EggTrax transfer unit ensures a safe and smooth transfer of the eggs from the longitudinal to the cross belt or to the vertical or rod conveyor at a speed of 2.6 m/min.

EggTrax has the following advantages:

- ✓ anti-crack fingers ensure a controlled egg transfer to the cross belt or the vertical conveyor;
- ✓ the integrated egg belt brush keeps the

egg belts clean;

- ✓ the transfer unit can be removed single-handedly and be cleaned with a high-pressure cleaner;
- ✓ the rope transfer (optional) transfers the eggs very smoothly while simultaneously allowing feathers, dust and eggs without shell to fall down between the threads.



Egg collection with the efficient EggCellent elevator and simultaneous automatic system egg collection

Egg collection

For egg collection in NATURA Step XL, Big Dutchman offers the EggCellent elevator or a vertical conveyor.

Vertical conveyors are the standard solution whenever there is little space between the nests and the cross collection. The elevator is a very good choice when the house consists of two levels, or when an automatic system egg collection is installed, since eggs must be collected from two levels in these cases.



Automatic system egg collection

System egg collection

Due to the slight gradient of the wire floor, eggs mislaid in the system (system eggs) roll towards the sheet metal perch. They remain safely under this perch until they are collected manually.

As an option, we offer an automatic system for collection of these eggs.

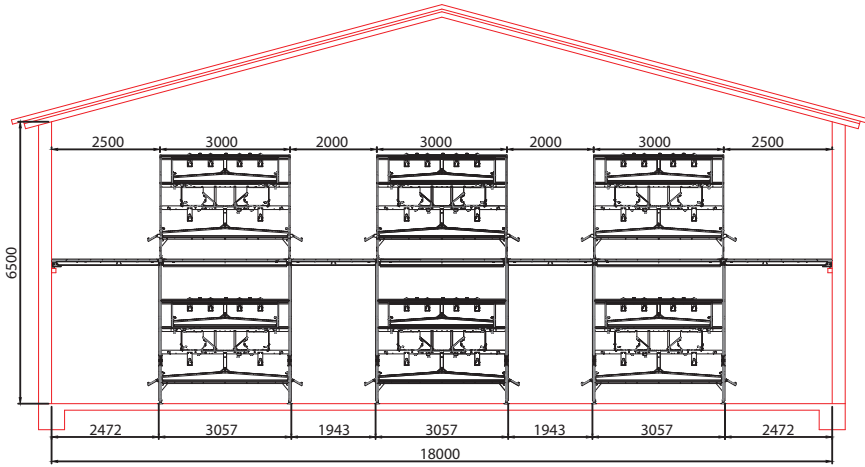
Two-level house with intermediate ceiling

Similarly to NATURA Step, NATURA Step XL is well-suited for use in two-level houses. Big Dutchman can also offer this aviary with an integrated intermediate

ceiling. This ceiling may consist of coated wood or, even better, a plastic material. A closed ceiling guarantees that the entire area is usable on the second level as well.

Depending on the system concept, aisle widths between 1.60 m and 2.50 m are possible.

Planning example: NATURA Step XL

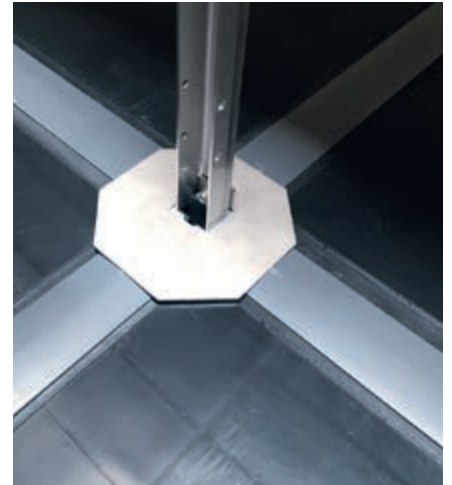


Advantages of the plastic ceiling

- ✓ the boards are made of polypropylene and therefore 100 percent resistant to water, i.e. wet cleaning is no problem;
- ✓ the boards are manufactured with the required dimensions, saving time during assembly because no cutting is necessary on site;
- ✓ no L-profiles are required in the longitudinal direction, allowing the fresh air to flow along the ceiling without obstructions;
- ✓ the white underside of the boards increases brightness in the lower level;
- ✓ the plastic boards are closed on all sides to prevent hotbeds for mites and other vermin.



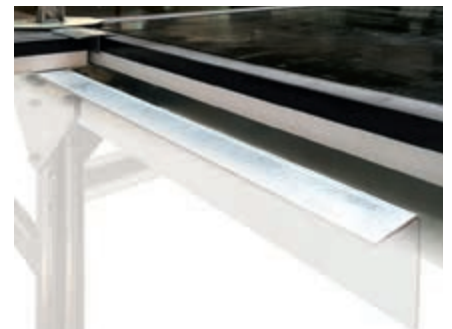
View of an intermediate ceiling made of plastic boards before the system is installed on the second level



The system posts are mounted securely to the intermediate ceiling with feet made of stainless steel



The smooth, white surface of the plastic boards allows the fresh air to flow crosswise through the barn without obstructions and also increases brightness in the lower level

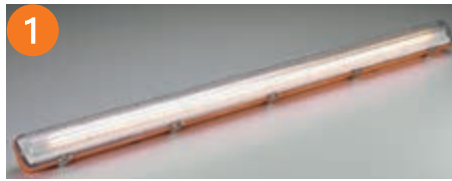


Entirely closed plastic board, with a dark upper side and a light underside

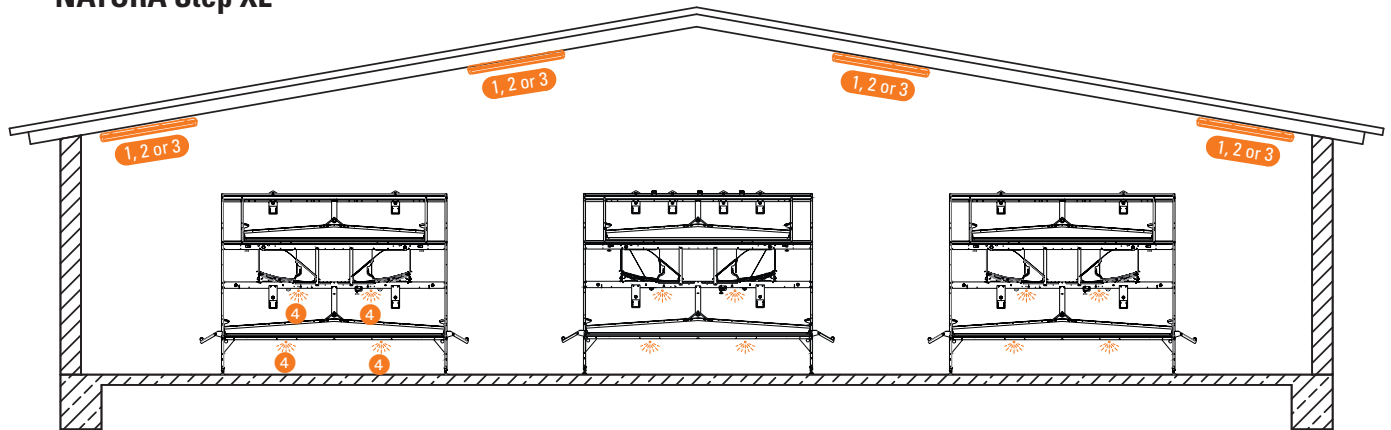
The correct lighting concept for optimal light distribution in the barn

A well-defined lighting program for the barn significantly contributes to successful egg production. Big Dutchman therefore recommends using the following energy-saving LED lamps, which work together when controlled by a lighting program.

- 1 Moisture-proof LED lamp for aisle lighting, dimmable, installed crosswise
- 2 ZeusLED panel light for aisle lighting, dimmable, optionally available with different LED boards, installed crosswise
- 3 FlexLED HO tube lamp for aisle lighting, dimmable, installed lengthwise
- 4 FlexLED tube lamp for system lighting, dimmable, optionally available with different LED boards



NATURA Step XL



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