



Big Dutchman®



NATURA Nova & NATURA Nova Barn

Our classic systems for bird well-being, functionality and efficiency
for organic, free range and barn egg production

NATURA Nova & NATURA Nova Barn

Your key to successful egg production

Big Dutchman has more than 35 years experience with (cage-free) aviary systems: an advantage that is consistently used for customer benefit.

The NATURA aviary system was designed with a focus on bird welfare, without compromising functionality and efficiency, which are very important to egg producers. The laying hens easily find their way around NATURA aviaries, can exhibit their natural behaviour and lay their eggs in optimally designed nests. Such requirements are met by NATURA Nova and NATURA Nova Barn in an ideal manner, but this does not prevent Big Dutchman from further developing and optimising the systems. In collaboration with customers, Big Dutchman constantly works on improving NATURA Nova and NATURA Nova Barn. Development is also influenced by a permanent exchange with eminent breeding companies so Big Dutchman designers can take into account the genetic progress with laying breeds. They consider not only the aviary itself, but also the best lighting concept for ideal illumination and the appropriate ventilation system. Both aviaries are versatile systems. Whether

you want to produce barn eggs or free range eggs, are planning conventional or organic egg production, a large or a smaller house: the

NATURA aviary systems from Big Dutchman are always the right choice for welfare-friendly and successful egg production.



Important features of NATURA Nova and NATURA Nova Barn

NATURA Nova is our aviary classic. It is characterised by the bottom nest and the feed and water sources all being on the same level. Naturally, this design has been re-used for the newly developed NATURA Nova Barn system.

- ✓ the hens can easily reach the nest, which increases nest acceptance;
- ✓ the farm staff use the raised connection aisle for daily bird inspection since it provides them with a good overview of the flock;

- ✓ the stepped design makes it easy for the birds to reach the different functional areas (resting, eating and drinking, and egg laying) with short jumps;
- ✓ 100 per cent of the house's floor is scratching area, which provides plenty of room to move for the hens;
- ✓ the large usable area, particularly of NATURA Nova Barn, ensures good utilisation of the house surface;
- ✓ the manure belts below the tiers collect

- most of the manure and transport it out of the house, decreasing the ammonia content in the air and improving hygienic conditions;
- ✓ the pullets quickly get used to the aviary after they are moved because water and feed are easy to find;
- ✓ the system is easy to close for the beginning of the batch.



Feet

The newly developed, fully plastic-coated post feet are stable, corrosion-free and easy to clean.

Sheet metal perch

Due to their shape, the sheet metal perches from Big Dutchman offer the hens a secure foothold, with greater safety and increased comfort when perching. The perches are much-used by the birds, so they need to be very durable. With a Zn-Al-Mg alloy, Big Dutchman guarantees a high corrosion protection and ammonia resistance in this area.



Cross sections and arrangement of the individual elements

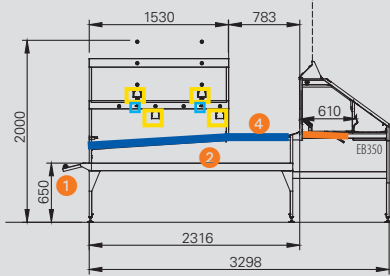
NATURA Nova is available in a well-thought-out number of versions. The product range includes the following aviary types, from which you may select the most suitable one depending on the height, width and available usable area of your house:

- NATURA Nova 270 1t (one tier)
- NATURA Nova 270 2t (two tiers)
- NATURA Nova 284
- NATURA Nova Barn
- NATURA Nova 280 Twin

The main differences between these systems

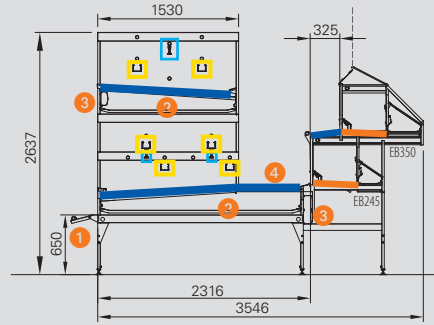
are their height and width, the number of manure belt levels and the number of nest rows. NATURA Nova Twin always consists of two NATURA Nova rows. This creates a portal, which provides the layers with much room to scratch.

NATURA Nova 270 1t



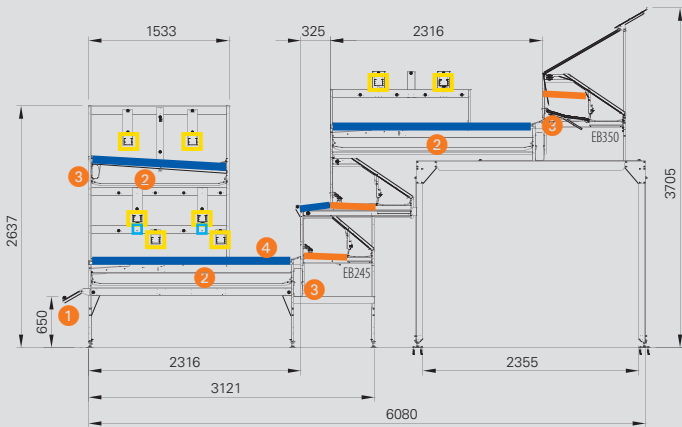
Ideal for buildings with low ceilings

NATURA Nova 270 2t



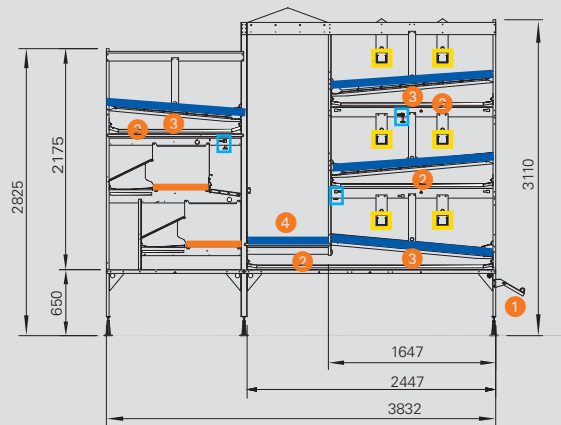
Ideal for organic egg production with winter garden

NATURA Nova 284



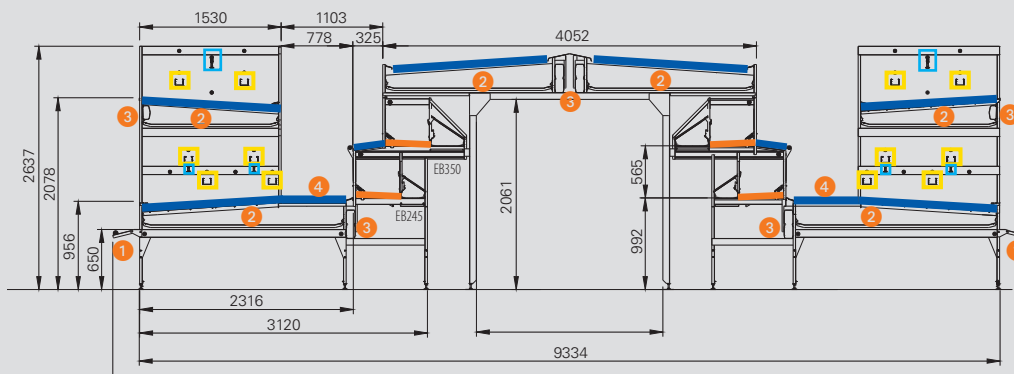
Ideal for wide buildings for organic and free range egg production

NATURA Nova Barn



Ideal for barn and free range egg production

NATURA Nova 280 Twin



Ideal for barn and free range egg production where the house's winter garden is not part of the usable area

Key

- 1 Approach aid
- 2 Manure belt level
- 3 Air duct (optional)
- 4 Connection/inspection aisle

The different functional areas are arranged in a way that encourages the hens to move around in the system.

- Orange Nest surface area
- Yellow Feed
- Blue Usable area
- Light Blue Water

All dimensions in mm



NATURA Nova: top tier serving as a resting zone

Resting zone

The top level is used as a resting zone. Equipped with feed lines and perches, it is possible to install an additional feed line 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 air duct (optional).



The Colony nest enables uninterrupted egg laying in both aviary systems

Colony nest

Both aviary systems come with the Big Dutchman Colony nest. The nest is easy to enter, has a soft insert and a divided tilting floor, increasing nest acceptance. Dirty or cracked eggs are very rare. Before the tilting floor closes the nest at night, all eggs roll off backwards onto the egg belt. The hens cannot roost in the nest, which reduces soiling while improving nest hygiene.



NATURA Nova: lower tier



NATURA Nova Barn: lower tier

Lower tier

The lower tier is equipped with up to four feed lines and one or two drinker lines, which are very easy to reach. This allows the layers to eat and drink without being disturbed. The accumulating manure drops onto the manure belt below and can be dried by means of an optional air duct.



The entire floor can be used as scratching area



Litter reduction system

Scratching area

The hens can use the entire house floor as a scratching area. The FlexLED tube lamp illuminates this area below the aviary with even and flicker-free light. The scratching area should be well lit, especially below the portal, as this makes the hens reluctant to lay their eggs here. An optional litter reduction system removes manure and excess litter automatically when necessary, significantly reducing the amount of dust.



NATURA Nova Barn: the exterior nests make bird inspection easier for the staff



NATURA Nova Twin: below the portal, the hens can use a large area for dust bathing and scratching

EggTrax egg belt drive

The EggTrax transfer unit transfers the eggs gently and safely from the longitudinal egg belt

(nest) to any connected egg collection system. The reinforced drive unit operates at a speed



Standard egg belt drive



Transfer unit with tension-adjustable wires made from stainless steel (optional)



Longitudinal egg collection with vertical conveyors



Elevator

Longitudinal egg belts

The exterior longitudinal egg belts are easy to reach, allowing the farm staff to check nests and egg belts. Covers protect the eggs from dust.

NATURA Nova Barn is easy to adjust to different building widths as this aviary system consists of a single row.



View of the egg belt

of 2.6 m/min and is available for different egg belt widths.

EggTrax has the following advantages:

- ✓ 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 washer;
- ✓ tension-adjustable stainless steel wires guarantee a smooth transfer of the eggs while simultaneously allowing feathers, dust and soft-shelled eggs to fall down between the wires;
- ✓ anti-crack "fingers" ensure a controlled transfer of the eggs to the cross belt.

Egg collection

Big Dutchman can offer different options for egg collection, including vertical conveyors, rod conveyors and elevators. Vertical conveyors are often used when there is little space between the nests and the cross collection. They also minimise the number of transfer points to the cross collection, ensuring smooth egg transport.

Elevators are a good choice for multi-level houses or when collecting system eggs automatically, since a single elevator is able to collect eggs from multiple tiers.



Manual system egg collection



Automatic system egg collection

System egg collection

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

As an option, Big Dutchman offers an automatic system for collection of these eggs.



Automatic system egg collection



System eggs being transferred to the elevator



Manure removal end set of NATURA Nova

Manure removal end set

The NATURA Nova and NATURA Nova Barn aviaries are easily accessible from the manure removal end set via stairs that lead to the inspection aisle.

The manure chutes are blocked off by robust curtains, thus neatly closing the system in the manure removal area.

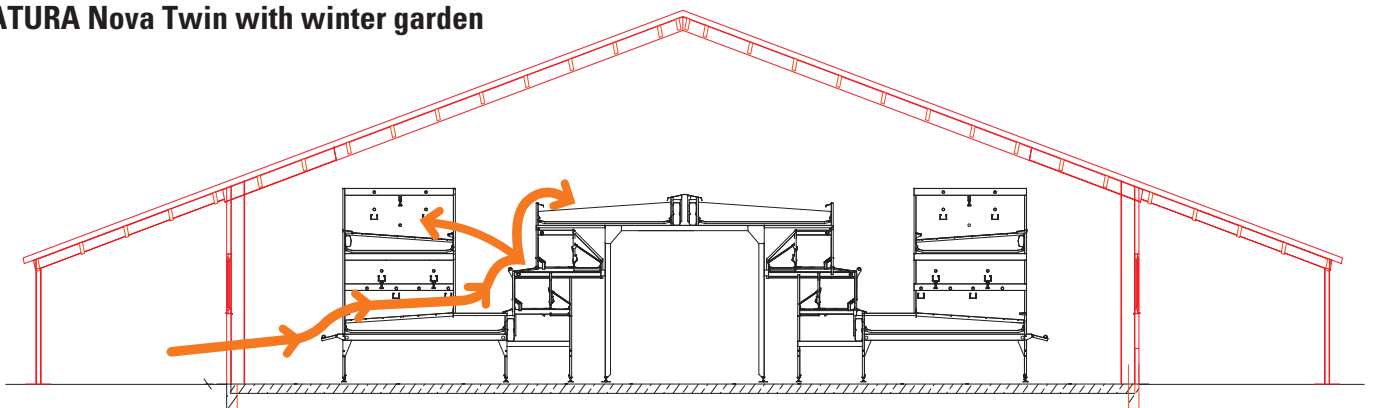
Winter garden: gradual transition from the house to the free range

Winter gardens allow a gradual transition from the house to the free range. The birds thus have the option of going outside even when the weather is bad. A roller curtain protects

from rain, storms and the cold. Due to the stepped and asymmetric structure of all NATURA Nova systems and the easy access to the aviary provided by this design

feature, the aviary is well-suited for organic and free range egg production.

NATURA Nova Twin with winter garden

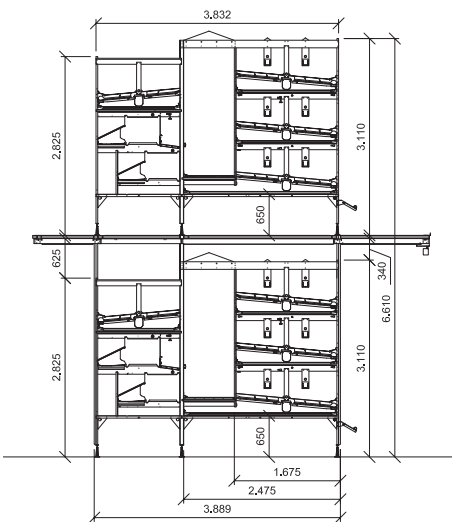


The hens can easily reach all functional areas with short jumps

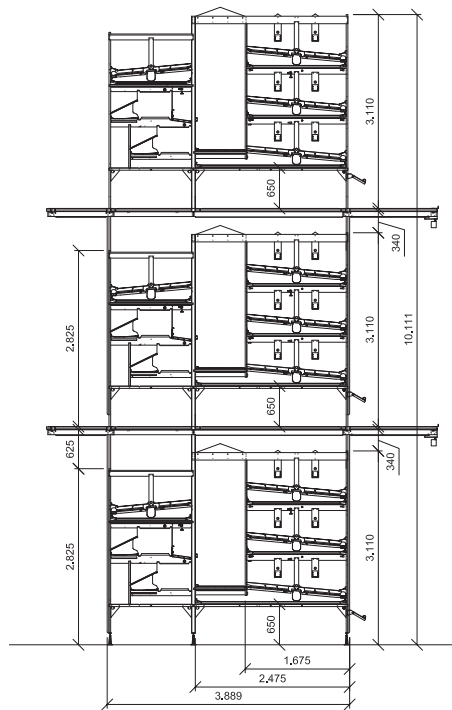


- ✓ The layers can use the winter garden as an additional scratching area when the weather is bad.
- ✓ A concrete floor prevents uncontrolled leaching of nutrients into the soil.
- ✓ The winter garden can be cleaned easily and thoroughly after each batch for improved hygiene.
- ✓ Options for enrichment, e.g. boxes for dust baths or PickPuck, a plate for pecking that simultaneously promotes beak smoothing, can be installed both in the winter garden and in the house.

NATURA Nova Barn for multi-level houses with intermediate ceiling



Cross section of NATURA Nova Barn for a two-level house



Cross section of NATURA Nova Barn for a three-level house

NATURA Nova Barn is well-suited for use in multi-level houses and also offered with an integrated intermediate ceiling. This ceiling can be made from laminated plywood or plastic panels. The entire floor on all levels is then available as usable area for the birds. The two Big Dutchman intermediate ceiling types do not require additional longitudinal supports, so the airflow under the ceiling is improved because there are no obstructions. Two- and three-level houses are already a Big Dutchman standard. Four levels are possible upon request.



The smooth, white surface of the plastic panels' underside allows fresh air to flow crosswise through the house without obstructions

Advantages of the plastic ceiling

- ✓ the panels are made from polypropylene and therefore absolutely resistant to water, i.e. wet cleaning with a high-pressure washer is not a problem;
- ✓ the panels are manufactured to the required dimensions, saving time during assembly because no cutting is necessary on site;
- ✓ the white underside ensures a more even light distribution in the lower level;
- ✓ the plastic panels are fully sealed to prevent liquid from entering during cleaning, improving hygiene.

The correct lighting concept for optimal light distribution in the house

An efficiently working lighting program is a prerequisite for the hens to stay in the aviary at night instead of in the scratching area. The light under the aviary should switch off first in the evening, followed by the lateral aisle lighting, and finally the ceiling lighting together with the system lighting. This will significantly reduce the number of floor eggs. Big Dutchman therefore recommends using the following

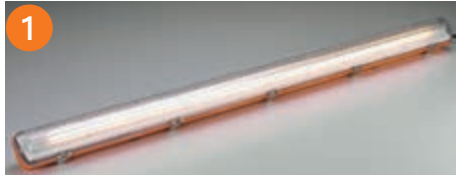
energy-saving LED lamps for aisle lighting, all of which can be dimmed between 0 and 100 per cent:

- 1 moisture-proof LED lamp, installed crosswise
- 2 FlexLED HO tube lamp, installed lengthwise
- 3 OneLite/DuoLite lamp, optionally available with different LED boards

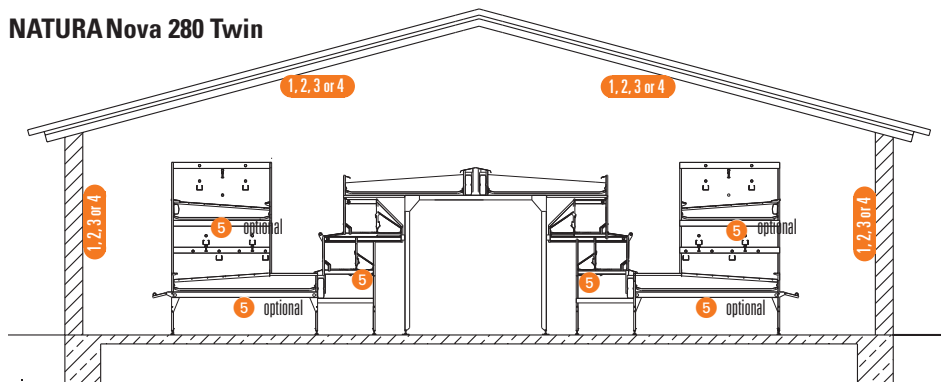
- 4 AuroraLED panel light, optionally available with different LED boards, installed crosswise

The Big Dutchman tube lamp FlexLED is a good option for lighting in the aviary itself and can also be dimmed between 0 and 100 per cent:

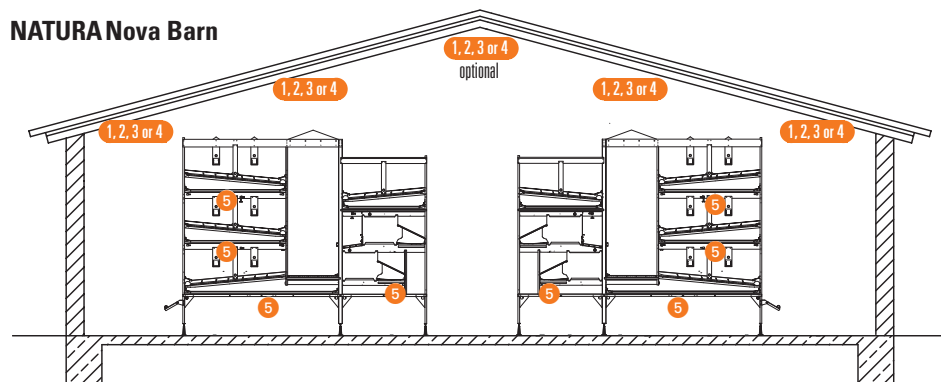
- 5 FlexLED tube lamp, optionally available with different LED boards.



NATURA Nova 280 Twin



NATURA Nova Barn



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