



# Big Dutchman®



## **NATURA 70**

The modern aviary system for barn egg production

# NATURA 70

## High production reliability, easy management

**NATURA 70** is a cage-free aviary system for egg production developed by Big Dutchman. The design concept is based on the idea of reducing the management effort while reliably increasing efficient production at the same time. NATURA 70 has the following advantages:

- ✓ the aviary remains locked during the phase of familiarisation: the pullets can easily find feed and water;

- ✓ manageable group sizes created by fixed partitions inside the system ensure that the pullets have a good start into the laying phase, with few mislaid eggs;
- ✓ using the system's "stairways", the hens can move between the different levels of the aviary without any difficulties;
- ✓ the hens can easily reach the scratching area through large openings along the entire length of the system;

- ✓ the longitudinal egg belts are located on just one level for a gentle transport of the eggs;
- ✓ mislaid "system eggs" can be collected easily, either manually or automatically;
- ✓ perfect access to the entire system due to easily operated folding grilles is attained;
- ✓ each row is completely functional on its own: systems of only one row in the barn are possible.



Familiarisation phase



Stairways provide the hens with access to all levels



The nest is located in the top tier

After the birds have been moved in, the system remains locked for a short time. The pullets can thus familiarise themselves with the new environment. Feed and water are easy to reach. Using the stairways, the pullets quickly become accustomed to all three levels of the aviary. Fixed partitions installed every 2.41 m (after every section) make for

manageable group sizes of up to 176 birds. This ensures that all nests are used from the very beginning. Nipple drinkers right in front of the nest encourage the hens to lay their eggs inside the nest. After the familiarisation phase, the system is opened fully. Perches in front of the openings help the hens reach the scratching area. They are now able to act out

their natural behaviours, i.e. scratching, pecking and dust bathing.

**Note:** The pullets should come from a rearing aviary. This will reduce stress during moving and is a prerequisite for a good start into the laying phase.

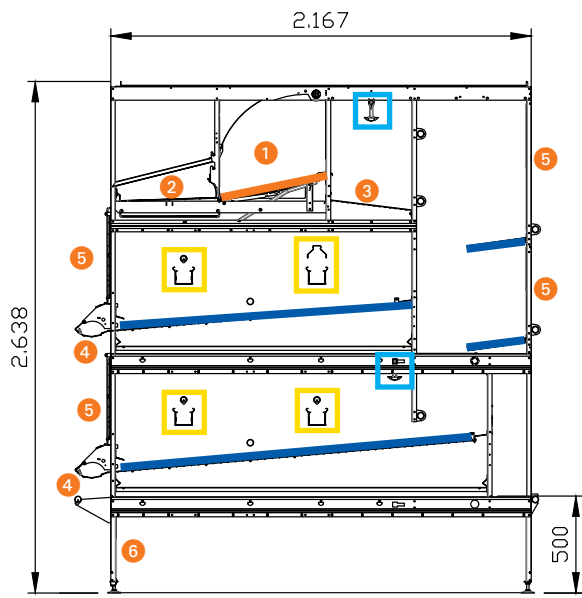


Laying phase: the system is open and the layers can use the entire litter area



Large openings give access to the scratching area

# Cross section and arrangement of the individual elements



Maximum of 72 hens per running metre and row.  
The different areas of activity are arranged in a way that encourages the hens to move around in the system.

- Nest surface area
- Water
- Feed
- Usable area

### Key

- 1 Nest
- 2 Longitudinal egg belt (500 mm) with cover
- 3 Wire flooring in front of nest
- 4 Egg channel for mislaid system eggs
- 5 Folding grille for easy bird monitoring
- 6 Optional separation

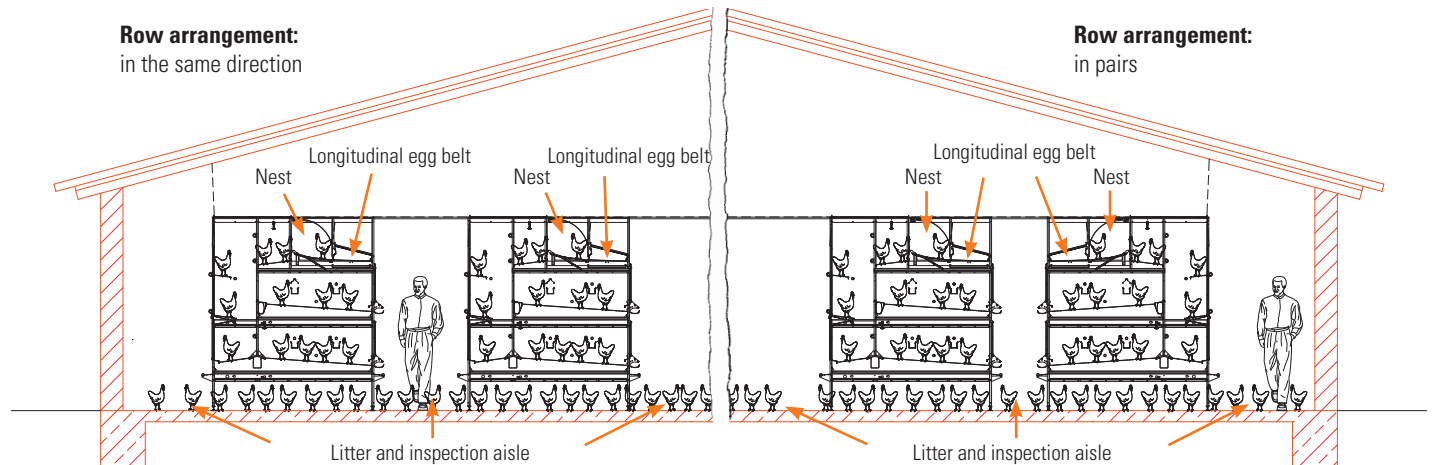
All dimensions in mm



NATURA 70 allows for high stocking densities because the hens can use the entire house floor as scratching area. For an ideal size of the bird groups, the scratching area can be split lengthwise and crosswise, even

repeatedly, depending on the house dimensions. The individual rows can be arranged either facing the same direction, i.e. all longitudinal egg belts are on the right-hand side of the house, or in pairs. The width of the aisles can

also be selected freely. The rule of thumb: the optimum density of 18 hens per square metre of house surface area is reached per 4 metres of house width (row + scratching area).



Automatic collection of system eggs



The entire floor area can be used as scratching area



Easy-to-use folding grilles give access to the system

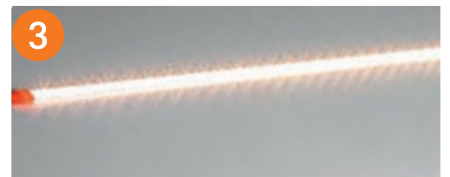


NATURA 70: the rows are arranged in pairs; the house is separated lengthwise on the right

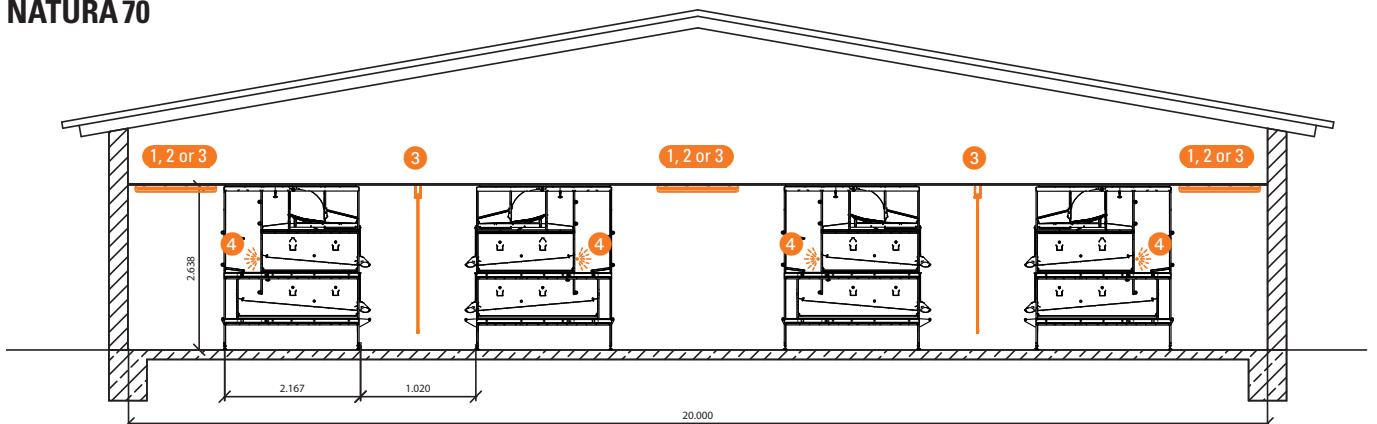
## The correct lighting concept for optimal light distribution in the barn

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 or suspended
- 4 FlexLED tube lamp for system lighting, dimmable, optionally available with different LED boards



### NATURA 70



# Two-level house with intermediate ceiling

NATURA 70 is well-suited for use in houses with two floors. Big Dutchman can also offer this aviary with an integrated

intermediate ceiling, which should be made of 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 1.20 m and 2.50 m are possible.



View of an intermediate ceiling made of plastic panels 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

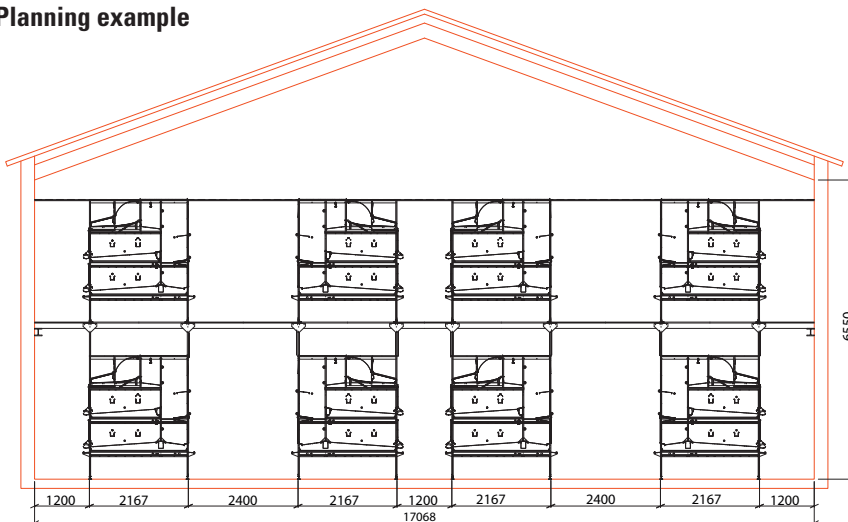


The smooth, white surface of the plastic panels' underside allows fresh air to flow crosswise through the barn without obstructions and also increases brightness in the lower level



Entirely closed plastic panel, with a dark and a light side

## Planning example



## Advantages of the plastic ceiling

- ✓ the panels are made of polypropylene and therefore absolutely resistant to water, i.e. wet cleaning is no problem;
- ✓ the panels 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 fresh air to flow along the ceiling without obstructions;
- ✓ the white underside of the panels increases brightness in the lower level;
- ✓ the plastic panels are closed on all sides to prevent hotbeds for mites and other vermin.

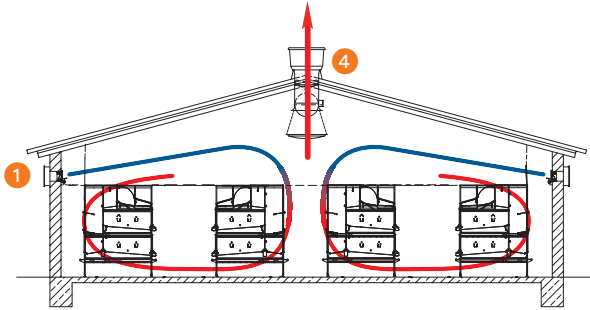
# The adequate ventilation concept for ideal climate conditions in the barn

An exactly fitting ventilation concept in the barn is an important factor in successful egg production. Big Dutchman can provide the best solution for every customer. The ventilation

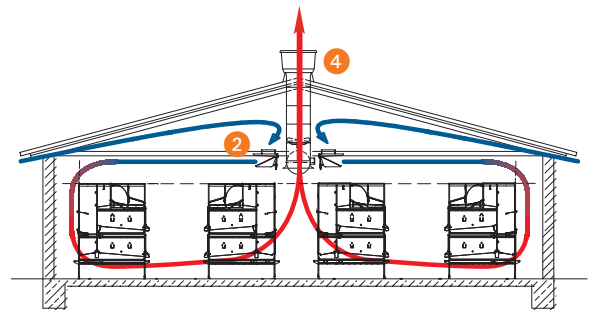
concepts below, for barns both with and without attic, create ideal climate conditions. The following fresh and exhaust air elements can be used:

- 1 CL 1200 or CL 1900 wall inlet
- 2 CL 1540 ceiling inlet
- 3 F.A.C. or Fumus fresh air chimney
- 4 CL 600 or CL 920 exhaust air chimney
- 5 AirMaster wall fan

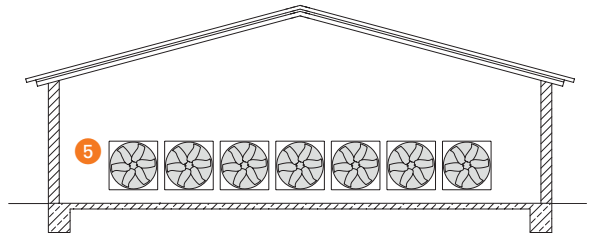
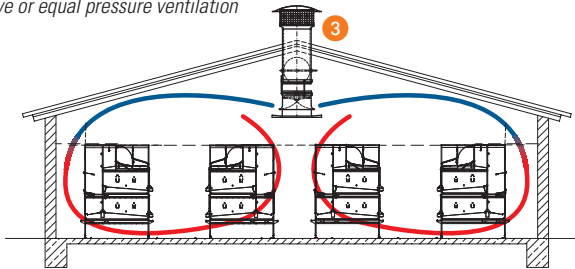
Negative pressure ventilation in a barn without attic



Negative pressure ventilation in a barn with attic



Negative or equal pressure ventilation



In addition to exhaust air chimneys, it is also possible to install AirMaster fans in the rear gable (tunnel ventilation).

## PickPuck: enrichment and natural wearing of the beak

PickPuck occupies the hens and remains permanently interesting because the birds can act out their natural behaviour of searching for feed. A swinging plate with a coarse surface is suspended below a drop pipe containing attractive feed such as wheat. When a hen picks onto the plate or nudges it from the side, this movement dispenses a small amount of feed that the hens peck. The specially coated surface of the plate incidentally also wears down the beak in a natural manner.



Automatized enrichment option especially for layers with untrimmed beaks



**Big Dutchman.**

**Europe, Middle East & Africa:**  
**Big Dutchman International GmbH**  
 P.O. Box 1163 - 49360 Vechta, Germany  
 Tel. +49(0)4447 801-0 · Fax -237  
 big@bigdutchman.de  
 www.bigdutchman.de

**USA: Big Dutchman, Inc.**  
 Tel. +1 616 392 5981 · bigd@bigdutchmanusa.com  
 www.bigdutchmanusa.com

**Brazil: Big Dutchman (Brasil) Ltda.**  
 Tel. +55 16 2108 5310 · bdb@bigdutchman.com.br  
 www.bigdutchman.com.br

**Russia: 000 "Big Dutchman"**  
 Tel. +7 495 2295 161 · big@bigdutchman.ru · www.bigdutchman.ru

**Asia/Pacific: BD Agriculture (Malaysia) Sdn. Bhd.**  
 Tel. +60 3 33 48 3555 · bdasia@bigdutchman.com · www.bigdutchman.com

**China: Big Dutchman (Tianjin) Livestock Equipment Co., Ltd.**  
 Tel. +86 10 6476 1888 · bdcnsales@bigdutchman.com  
 www.bigdutchmanchina.com