



Big Dutchman®



NATURA Primus & NATURA Filia

The modern rearing aviaries
for healthy and uniform pullets

NATURA Primus and NATURA Filia

The right aviary for every pullet producer

Big Dutchman can offer two different types of aviaries for successful pullet rearing. Both systems have proved their technical maturity in the market and are thus a prerequisite for good rearing results, i.e. uniform and healthy pullets. Pullets that are intended for laying aviaries should always be reared in aviary

systems as well. Intensive training from the first day of life is the most important factor in pullet rearing. Only when pullets learn how to move around in an aviary from the very beginning will they have a good start into the laying period. Big Dutchman can offer NATURAPrimus and NATURAFilia, two rearing aviaries

that can easily be modified to meet your personal requirements. Let our experts advise you to find the best solution for your individual situation.

Advantages of the BD aviaries at a glance

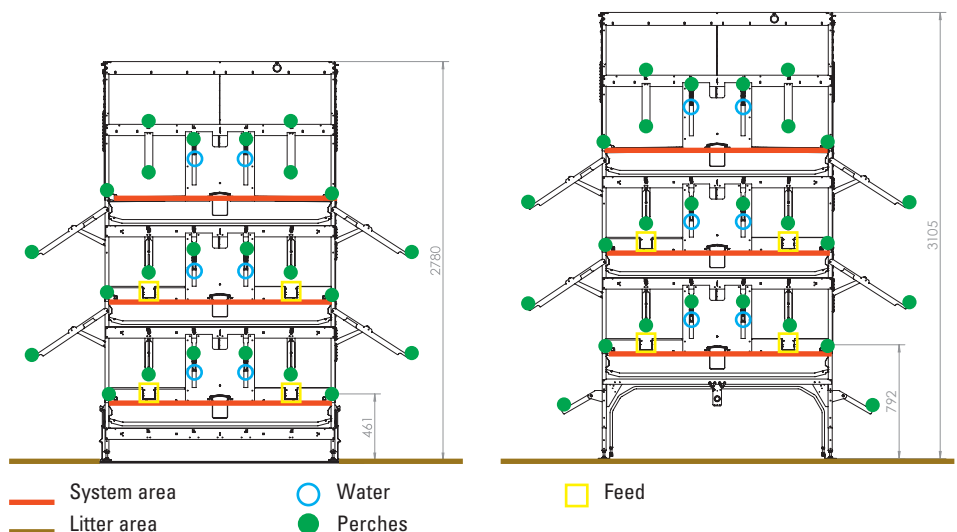
- ✓ very flexible handling of front grids for optimum accessibility and easy inspection;
- ✓ height-adjustable perches above the trough protect against dirt, reduce feed wastage and stop chicks from sitting in the trough, especially while the chain is running;
- ✓ height-adjustable drinkers in the first and second tier ensure optimum water supply at any age;
- ✓ automatically folding approach perches allow easy access to the aviary at any time and reduce the amount of manure in the aisle: birds are trained to roost in the system;
- ✓ available as raised system so that the house floor under the system is part of the litter area and can be closed off automatically in the start phase;
- ✓ all wire meshes are zinc-aluminium coated for high corrosion protection and a long service life of the aviary;
- ✓ available with or without air duct.

NATURA Primus

The three-level rearing aviary is available in a variety of versions

NATURAPrimus can be supplied in two widths (1600 and 1866 mm). In both widths, the aviary is also available as raised system.

The house floor beneath the raised system is used as litter area, i.e. it counts as usable area. In addition to the house width, the height of the barn is thus a crucial factor, especially for existing houses. To achieve the ideal stocking density, the aviary should be selected based on the house dimensions for this reason.



NATURAPrimus

- ✓ NATURAPrimus is available in a great variety of versions to achieve ideal stocking densities in any barn;
- ✓ foldable partitions in the system every 2.40 m (optionally every 1.20 m) guarantee that moving in and out as well as catching for vaccination purposes remain stress-free;
- ✓ the third level may be equipped with feed lines as well.



NATURAPrimus with folding cover plate



Raised NATURAPrimus with plastic cover sheet

NATURAPrimus is a rearing aviary which meets the requirements of day-old chicks and pullets in an optimal way. The bottom and centre tiers are equipped with feed and water lines. The top level serves as a resting zone as the pullets instinctively seek out the highest possible place at night.

We recommend moving the day-old chicks into the central level, where it is easier to maintain high and uniform temperatures in the first ten days.

Half of the birds should be moved into the bottom tier after approximately ten days to provide the birds with more freedom of movement.

A heating pipe supplies heat even better and more directly in the lower tiers.

Optimal climate conditions are a prerequisite to make the chicks distribute evenly in the tier so that all birds have a good start in the aviary.

The start tier should be opened between the chicks' third or fourth week of life.

They can then move freely throughout the entire house, learning to jump and to fly. To find feed, the birds need to leave the resting zone and move to the lower levels.

This switching from level to level animates the pullets to move around in all tiers actively. When the pullets are moved to the laying aviary around week 16, they immediately know how to use the different facilities (feeding, scratching, resting area).



View into a rearing house shortly after chicks were moved in



A heating pipe in the bottom tier supplies direct heat during the first days

Due to automatically folding perches, pullets can easily reach the individual tiers during the day. To ensure that the pullets spend the night in the system, the perches are folded against the system at night.

- better overview during inspection rounds
- no droppings below the perches, i.e. fewer ammonia emissions, increased hygiene in the barn

In the first weeks after opening the system, the pullets can easily reach the bottom and central levels using chick bridges and ramps.



Automatically folding perches; the litter area below the system is still closed off



Chick bridges and ramps help the birds reach the system

Detailed technical solutions with many benefits for the producer

The bottom wires as well as all other wire meshes used in the NATURAPrimus aviary are zinc-aluminium coated. This special alloy resists corrosion much more effectively than other materials, thus guaranteeing a longer service life. The bottom wires have the following mesh widths:

– bottom and central tier: $\frac{3}{4} \times \frac{3}{4}$ inches so

the chicks have a secure foothold;
– top tier: 1 x 1.5 inches for good self-cleaning properties.

A perch above the nipple drinkers and the trough protects against dirt. The nipple drinker line can be adjusted to the birds' changing height. The perch above the trough is also adjustable: its height can be changed based on the bird's age, thus

increasing hygiene and bird health.

A foldable partition is installed after every section of 2.41 m in the first and second tier. Such partitions may also be mounted after every half-section (every 1.20 m). They help to create smaller groups, which in turn makes it easier to vaccinate and move the birds.



Bottom wire in the bottom and central tier;
 $\frac{3}{4} \times \frac{3}{4}$ inches



Foldable partition – closed;
height-adjustable tube above the trough



Foldable partition – open;
the entire sliding front has also been opened



The entire sliding front is closed



Upper part of the front opened for inspection purposes



A manual winch in each tier opens the sliding fronts simultaneously and easily

Sliding front grids close the bottom and central tiers. The two grids slide into one another when they are opened, thus making it possible to only open the top

half for inspection purposes. The sliding fronts can be opened individually by hand or centrally using a manual winch (option). Advantages include simple

handling, easy access to and inspection of the birds, and little effort required by the workers for their tasks.



View into the top tier used as a resting zone – with front grid (option)

The top tier may also be equipped with a front grid as an option. A manual winch opens and closes this grid centrally. The special sheet metal perch (patent no. 29919443.4) – also available in stainless steel – ensures that the pullets face the aisle when sitting on the system. This has the advantage of 70 percent less manure in the aisle, fewer ammonia emissions in the barn and an improved house climate.

NATURA Folia

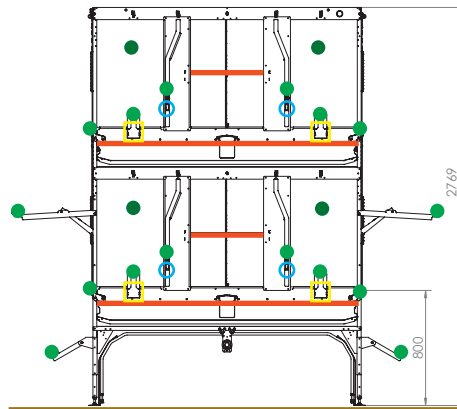
The two-level rearing aviary provides pullets with much freedom of movement from the very first day

NATURAFolia is available in two widths (1866 and 2239 mm). The large distance between the aviary levels makes for a very open design. The farm staff are easily able to access both levels. Feed and water are within easy reach for the birds. The special feature of NATURAFolia is its internal intermediate level, located in the back of both tiers.

- this generates additional system area;
- the birds can jump back and forth from an early age, even if the system is still closed: training as early as possible;
- the height of the drinker line corresponds to the height of the intermediate level.



View into a rearing house shortly after chicks were moved in



- System area
- Litter area
- Feed
- Water
- Perches
- Additional perches

As NATURAFolia consists of only two levels, it is well suited for lower stocking densities. This aviary is therefore an ideal solution to meet special requirements in pullet rearing (organic egg production). The price/performance ratio per bird place is still very good. Four optional perches can be installed additionally, thus cancelling out the limiting factor of the number of perches available in the system. NATURAFolia is always a raised system, i.e. the house floor beneath the system can be counted as litter area.



NATURAFolia with internal intermediate level



NATURAFolia

- ✓ intermediate levels inside the system help train the pullets to jump and fly even from a very early age (while the system is still closed), i.e. the system can be opened very early on and the pullets can use the litter area extensively;
- ✓ sliding partitions every 1485 mm reduce stress during moving in and out and when catching the birds for vaccination;
- ✓ an optimised section dimension of 1485 mm improves productivity;
- ✓ optimum ratio between usable area and feeding space ensures ideal utilisation of the house;
- ✓ each level can be equipped with two additional perches.

Detailed technical solutions with many benefits for the producer

The bottom wires as well as all other wire meshes used in NATURAFilia are zinc-aluminium coated for improved corrosion protection, thus providing a longer service life.

The mesh width of the bottom wires in both tiers is $\frac{3}{4} \times \frac{3}{4}$ inches.

A perch above the nipple drinkers and the trough protects against dirt. The height of the nipple drinker line can be adjusted to the birds' growing rate. The perch above the trough can also be adjusted in height so it corresponds to the birds' age for increased hygiene and bird health.

A sliding partition is installed between all sections (1485 mm) in both tiers. The bird groups are thus smaller, which makes vaccination and moving easier.



Sliding partition – closed



Open partition, height-adjustable perch above the trough, height-adjustable drinker line



View into a compartment: sheet metal perches in both tiers ensure a secure foothold

Sliding front grids close off both levels at the beginning of rearing. It is possible to open only the top part of the sliding front for inspection purposes by sliding the

grids into one another, either individually by hand or centrally using a winch.

In a NATURAFilia aviary, the producer can adjust the drinker lines in both tiers to a height at which the birds can reach water only when they are on the intermediate level. They are thus trained to jump from feed to the water supply – so-called “drinker training”. This is a great advantage as it ensures that eggs are laid in the nest when the pullets are moved to the laying aviary later on.



The upper part of the front grid is open for inspection purposes



The entire sliding front is open; chick bridges and ramps help the birds reach the different levels



Water can only be ingested from the intermediate level

Ideal lighting in the barn and the aviary

Lighting a poultry house in an ideal manner is an important topic – not only for layers, but also in pullet rearing. Lighting programmes for the rearing and laying period should harmonise well to guarantee ideal lighting. The Big Dutchman lighting concept differentiates between aisle and aviary lighting.

Our product range **for aisle lighting** includes three different lamps:

- 1 BD moisture-proof lamp
- 2 moisture-proof LED lamp Zeus
- 3 tube lamp FlexLED HO (high output)

None of these lamps show any flickering. They can all be dimmed from 0 to 100 percent. The Zeus and FlexLED HO LED lamps save up to 50 percent of energy compared to the traditional moisture-proof lamps.

We only use our energy-saving FlexLED lamp **in the aviary** itself (bottom and central tier):

- 4 tube lamp FlexLED

In raised systems, FlexLED should also be used to light the litter area below the system. FlexLED is available in two lengths: 1.80 m and 2.40 m.



Moisture-proof LED lamp Zeus for aisle lighting

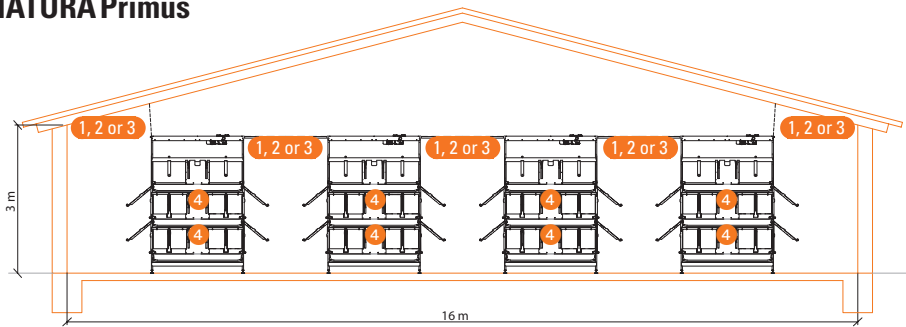


FlexLED to light the litter area below the system

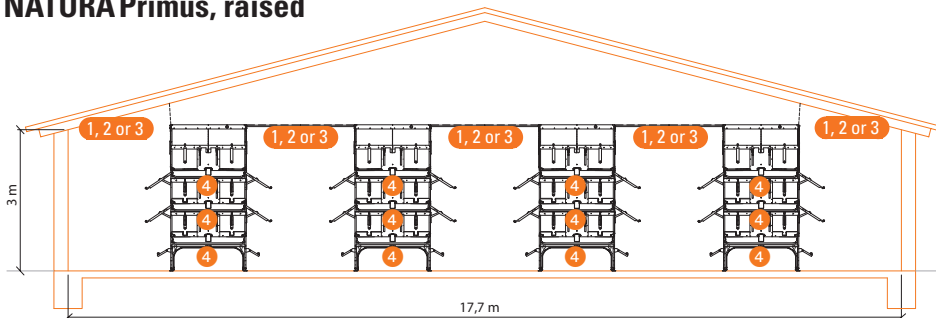


FlexLED to light the second tier

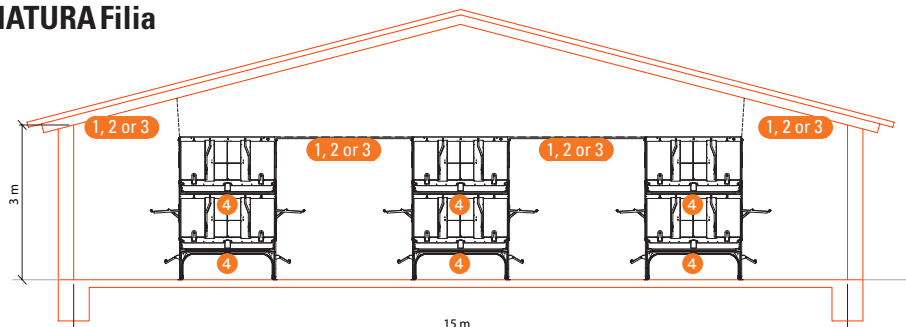
NATURA Primus



NATURA Primus, raised



NATURA Filia

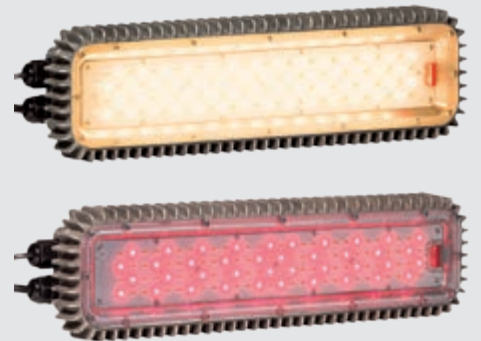


1



BD moisture-proof lamp

2



Moisture-proof LED lamp Zeus – optionally available with different LED boards

3

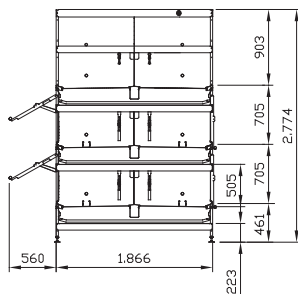


FlexLED HO and FlexLED tube lamps

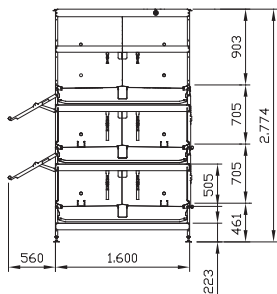
4

Technical data and planning instructions

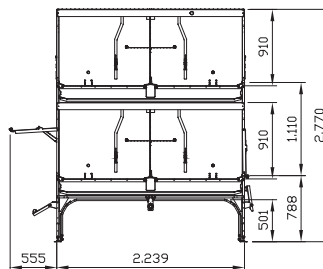
NATURA Primus 18



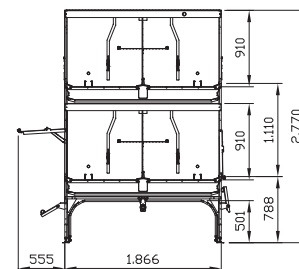
NATURA Primus 16



NATURA Filia 22



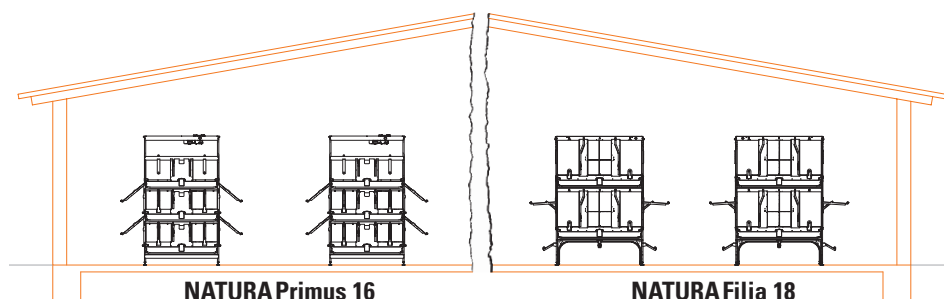
NATURA Filia 18



NATURA Primus		Type 18	Type 16	NATURA Filia	Type 22	Type 18
System width	mm	1866	1600		2239	1866
- incl. approach perches	mm	2986	2720		3349	2976
System height	mm	2774	2774			
- raised	mm	3105	3105		2770	2770
Length per section	mm	2412	2412		2970	2970
Recommended no. of birds/section*		440	390		530	480

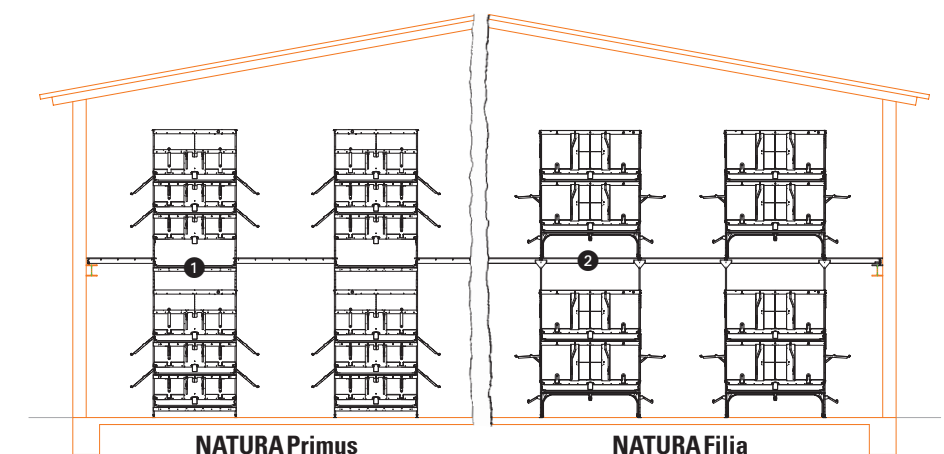
* rearing until week 17

The recommended bird numbers may deviate to comply with regional directives.



Recommended aisle widths:

- outer aisle: 1.60 m
- central aisle: 1.80 m



Two-level houses

Both rearing aviaries are also ideal solutions for two-level houses. Where NATURA Primus is used, the intermediate ceiling is not continuous, because the first manure belt of the second level ① is located below the intermediate ceiling instead. The litter can then be moved from the aisles onto this manure belt when preparing to clean the barn after a batch.

When installing a raised NATURA Primus or a NATURA Filia system in a two-level house, the intermediate ceiling is continuous ② and can thus be considered usable/scratching area.



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