JUNIOR

CAGE SOLUTIONS FOR PULLET FARMING

TEXHA®

Cage solutions for pullet farming

Cage solutions by TEXHA are installed at the poultry farming facilities in over 30 countries worldwide. Our equipment demonstrates consistently high efficiency and performance.

TEXHA's product family includes JUNIOR multi-purpose pullet farming cage solution suitable for

- Laying hens
- Laying hen breeders (joint or separate management)
- Broiler breeders (separate management)
- Grandparent breeder flocks

New battery cage Hopper+ is intended for growing laying hen pullets and broiler chicks of final cross-breed. The system offers automated poultry harvesting process with minimum personnel involvement.

The process of pullet farming under industrial conditions and on a commercial scale requires correct approach towards the choice of equipment.

Use of the state-of-art technologies and continuous modernization are the only way to maintain competitive edge and achieve success on the market.

QR code for YouTube video

JUNIOR multi-level battery cages

TEXHA offers fully automated battery cages consisting of 3 to 6 levels with integrated drinking, feeding, lighting and litter removal systems.

The equipment is made of high-quality steel with anticorrosive coating. A distinctive feature of our solutions is the minimum use of plastic. All drive unit and power unit parts are made of tempered steel to ensure greater durability and longer service life as compared to similar plastic components.

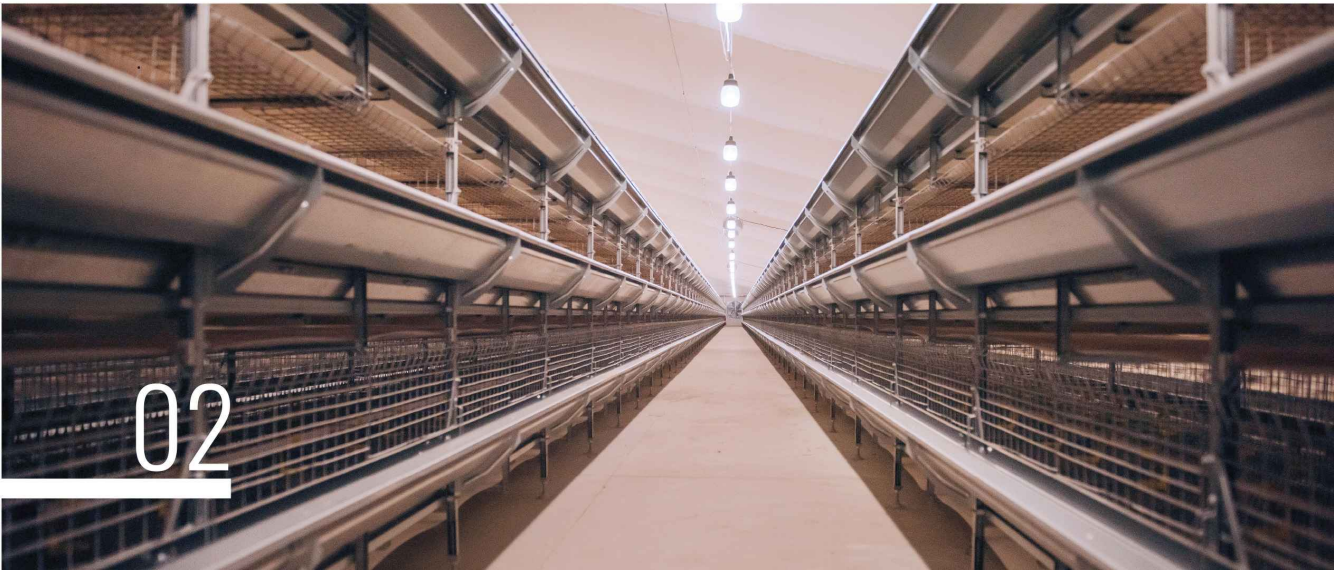
Metal mesh floors have the special coating with excellent anticorrosive properties. The steel mesh contributes to better hygiene as compared to plastic mesh, since the litter easily penetrates through it and immediately lands on the litter removal belt.

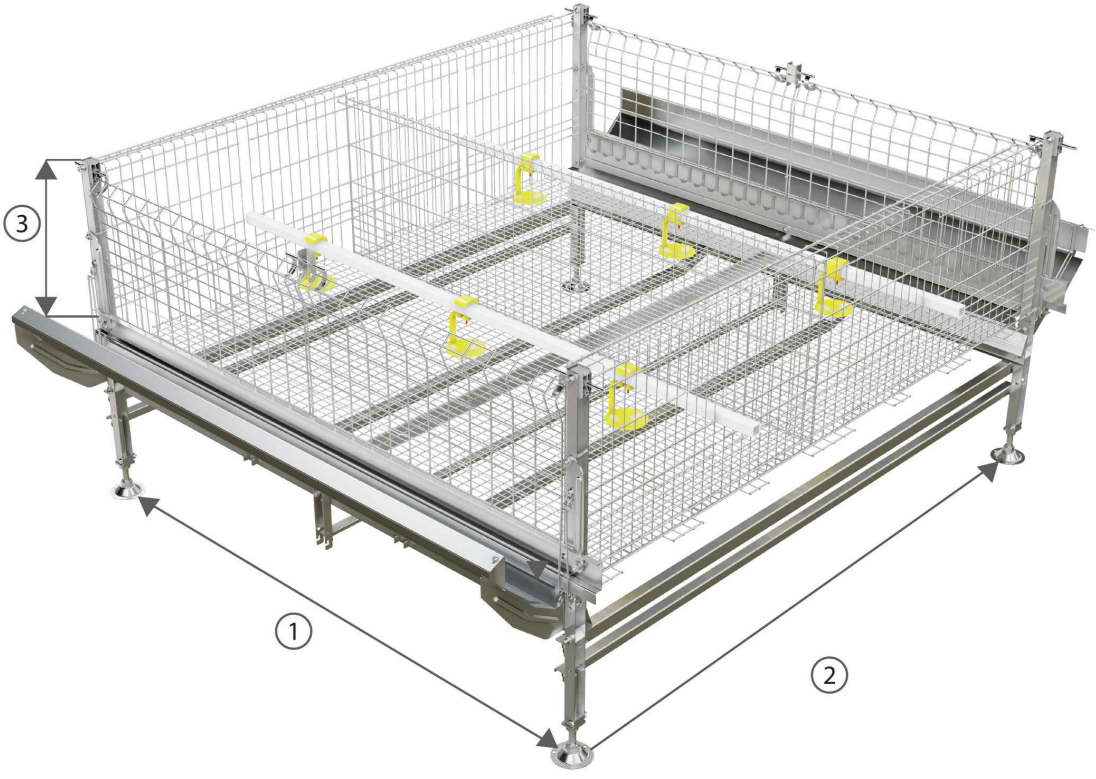
Mesh partitions ensure free air circulation in the cage modules, which positively affects the microclimate in the aviary and the general poultry condition.

The waste air does not stagnate, since it is immediately replaced with the fresh air.

The standard sunset/sunrise system simulates the natural daily alternation of day and night. Intensity and uniformity of the illumination allow creation of the perfect conditions for poultry management.

The polypropylene litter removal belt automatically cleans the cages of litter and immediately evacuates the litter out of the building.





Specifications	Laying hen pullets	Laying hen breeders - hens	Laying hen breeders - roosters	Broiler breeders - hens	Broiler breeders - roosters	Hopper+
(1) Cage width, mm	1 200	1 200	1 200	1 200	1 200	1 200
(2) Cage depth, mm	675	675	675	675	675	1 610
Inter-level distance, mm	518	518	768	518	518	654
(3) Façade height, mm	370	370	620	370	370	383
Cage area, sq.m	0,81	0,81	0,81	0,81	0,81	1,93
Number of birds per cage	28	27	20	15	15	64
Floor area per one bird, sq.cm	288,8	300	400	545	545	300
Feeding front per one bird, cm	4,28	4,44	6	8	8	3,75

New multi-level battery cages Hopper+

In this equipment version, TEXHA has implemented automation of one of the most time-consuming and labor-intensive technological processes – i.e. the poultry harvesting process

The floor of each cage module is manually shifted aside, and the birds step on the moving litter removal belt, and the conveyor carries them to the harvesting table. Around 6-12 hours before the scheduled harvesting, the feeding line is shut down, and the litter removal belt is cleaned. The harvesting process is carried out in the darkness or in the special lighting mode in order to avoid poultry stress when leaving the aviary and the resulting weight loss. The cage design eliminates the risk of poultry injuries and damage during both farming and harvesting.

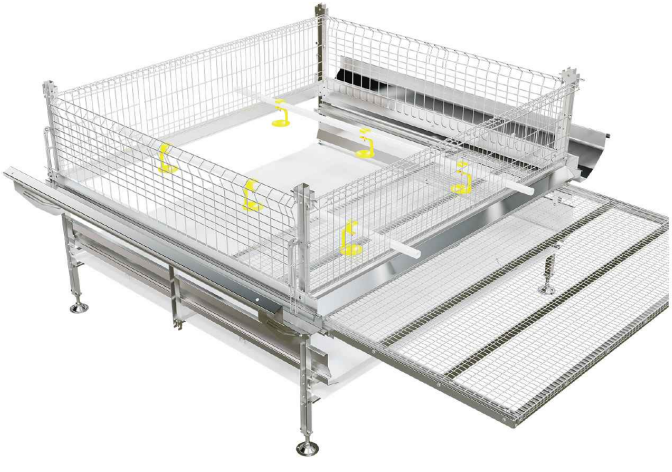
Benefits of automated poultry harvesting process

- Labor saving
- Time saving, since less time is needed for the whole harvesting process
- Smooth poultry harvesting, handling and shipping process
- Minimal poultry stress and injury rate
- Expected harvesting process duration, conveyor operation speed adjustment features

Floor shifting during the poultry harvesting process

Closed floor

Half-opened floor



Fully opened floor

Battery cage for pullets

QR code for 360° design model

Feeding process

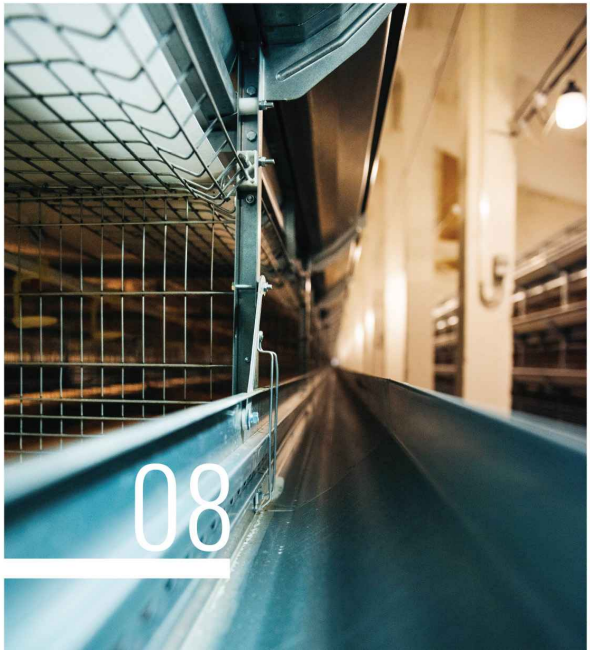
The feeding system ensures that each bird in the aviary is supplied with sufficient quantity of feed. There are two feeding system options available: the hopper-operated feed distribution system and the chain- operated feed distribution system.

The hopper-operated feed distribution system consists of the lengthwise feed tray and mobile feed distribution hopper with dispenser. The feed distribution hopper filled with feed moves along the battery cage and evenly distributes the feed over the entire length of the lengthwise tray. For battery cages of greater length, the line may be equipped with intermediate hoppers to fill the empty feed distribution hopper with extra feed.

In chain-operated feed distribution system, the feed is distributed over the entire battery cage level by a chain conveyor moving in the looped lengthwise tray. The key benefit of the chain-operated feed distribution system is the greater tray filling rate, since the chain movement speed may reach up to 32 m/minute. Also, unlike the hopper-operated systems, the chain conveyor may be activated for each battery cage level separately.

The cage solution includes the adjustment plate to ensure free access to feed for birds of any age. This plate also serves as a barrier to prevent the chick from leaving the cage.

Inside the cage, there is a special grating, thanks to which all chicks regardless of size may access the feed. This design feature allows complete elimination of the chick grading step.



Drinking process

The drinking system consist of the particulate filter, the medicator, the water meters, the water supply lines installed in cages and the nipple drinkers. Two drinking lines are routed at each battery cage level, so that six nipple drinkers with drop catchers are installed in ever cage module. The nipple are vertically actuated and may rotate by 360°. The line height may be adjusted depending on the age of the birds, so the free access to water is ensured even for one-day-old chicks.
Where necessary, the medicator may be used to add medicines, vaccines, minerals and other water-soluble supplements to the water.

Litter removal process

Polypropylene litter removal belt runs at every battery cage level underneath the cage floor.

The litter penetrates the floor mesh and lands on the belt, which carries it to the crosswise conveyor for evacuation from the building and discharge into a disposal vehicle. The entire process is fully automated and can be activated either manually or according to the pre-programmed schedule. The belt is thoroughly cleaned of any litter residues by plastic scrapers and rollers. Regular cleaning reduces the concentration of ammonia and other harmful gases in the building, improves the hygiene in the aviary and contributes to the maintenance of optimal microclimate conditions. The polypropylene belt is made of high-quality raw materials at TEXHA's in-house manufacturing site.

New heat-resistant litter removal belt

New material formula allows us to manufacture heat-resistant litter removal belts with the same properties as the conventional belt, but with extra fire-retardancy. These belts are recommended to improve fire safety at the facility.

Litter removal belt specifications

Belt thickness	1–1,2 mm
Belt width	500–2400 mm
Roll length	up to 800 mm

Litter removal belt features

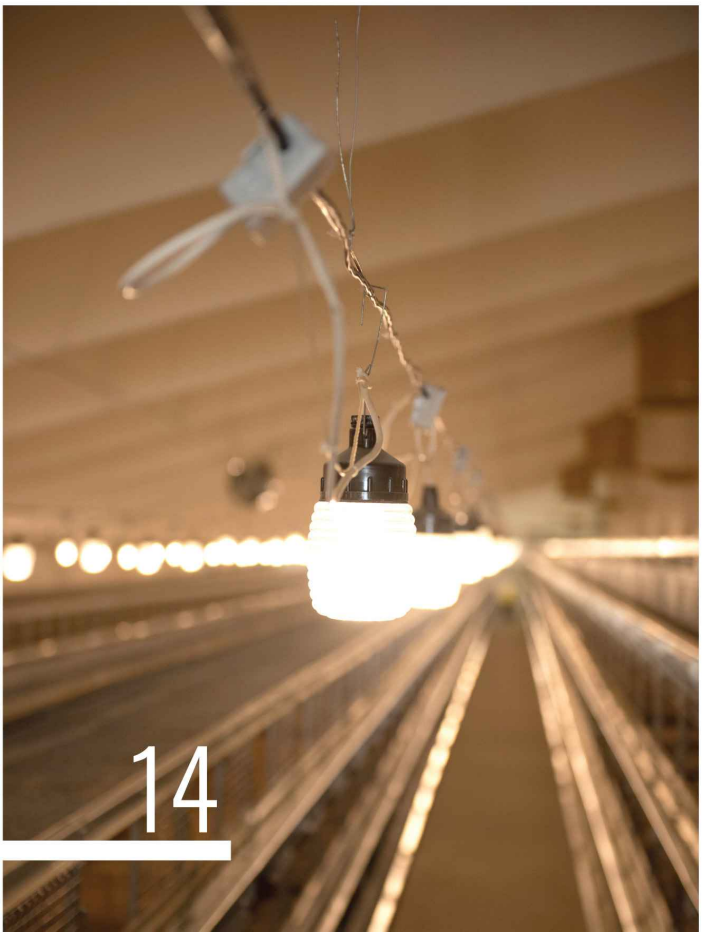
- Resistant to aggressive environments, chemicals, detergents and disinfectants
- High tensile strength
- Operating temperature range between 10 and 60°C
- Smooth surface with low adhesion properties
- Easy to clean, may be washed with hot water and disinfected

Lighting and microclimate

Health, growth and productivity of a poultry flock directly depend on temperature, humidity and illumination in the aviary. Microclimate in the aviary is especially important for chicks during the early life, when they are the most susceptible to the environment. However, even afterwards, the climate control system must constantly maintain the optimal microclimate conditions.

The alternation of day and night Is controlled by the artificial lighting system. The lights are switched on and off smoothly so as to simulate the natural diurnal cycle.

The system maintains optimal microclimate conditions in the aviary. Temperature, humidity and air composition parameters are managed by the climate control unit. Data from sensors are processed by the computer, which, where necessary, adjusts the operation of the climatic equipment.



Powerful exhaust fans remove the excessive heat and ensure continuous replacement of the waste air with the fresh air. The air circulates inside the building in the natural way, however, where applicable, additional axial fans may be installed to redirect and mix the air flows. Where necessary, the aviary may be also equipped with extra cooling, humidification or heating systems depending on local climate conditions and customer's needs.

The microclimate and lighting systems maintain consistent comfortable living conditions for poultry throughout the year regardless of the season or daylight hours.

Notes

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