



畜禽养殖整体解决方案  
The Best Solution For Livestock Breeding

中裕科技种鸡产品介绍  
诸城市中裕机电设备有限公司

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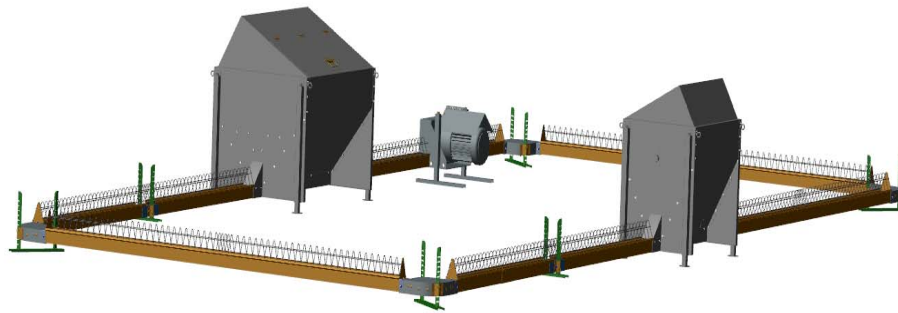
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畜禽养殖整体解决方案

## • Feeding system



# Central feed transport system

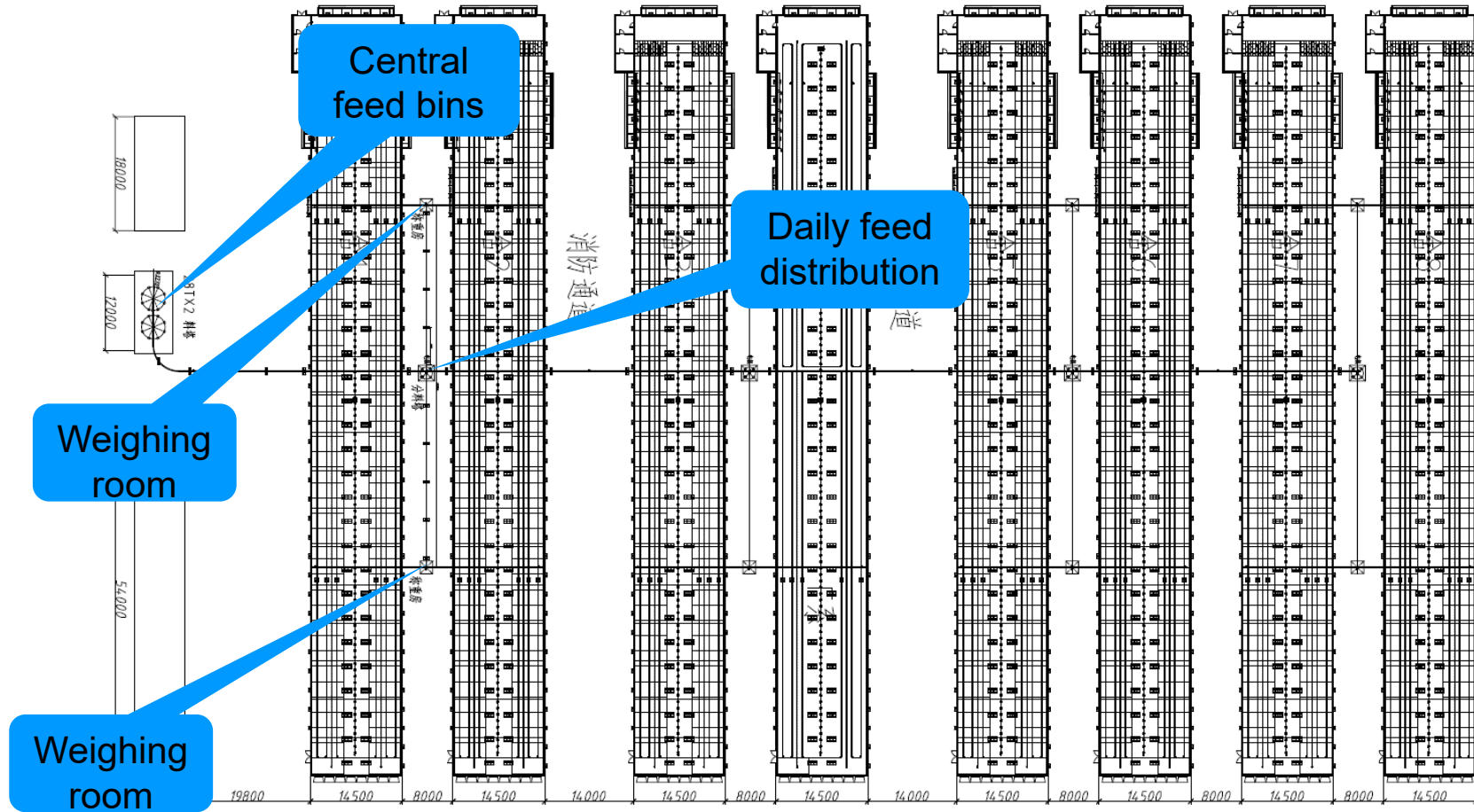
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- Advantage&Main information

- 1、 Per farm central feed bins with transport augers,Each bin can be discharged separately.
- 2、 Flex augers transport feed to the daily bin per two houses.
- 3、 From house to house flex augers automatic controlled.
- 4、 Per two houses one electronic weigher.



# Central feed transport system



# Feed distribution

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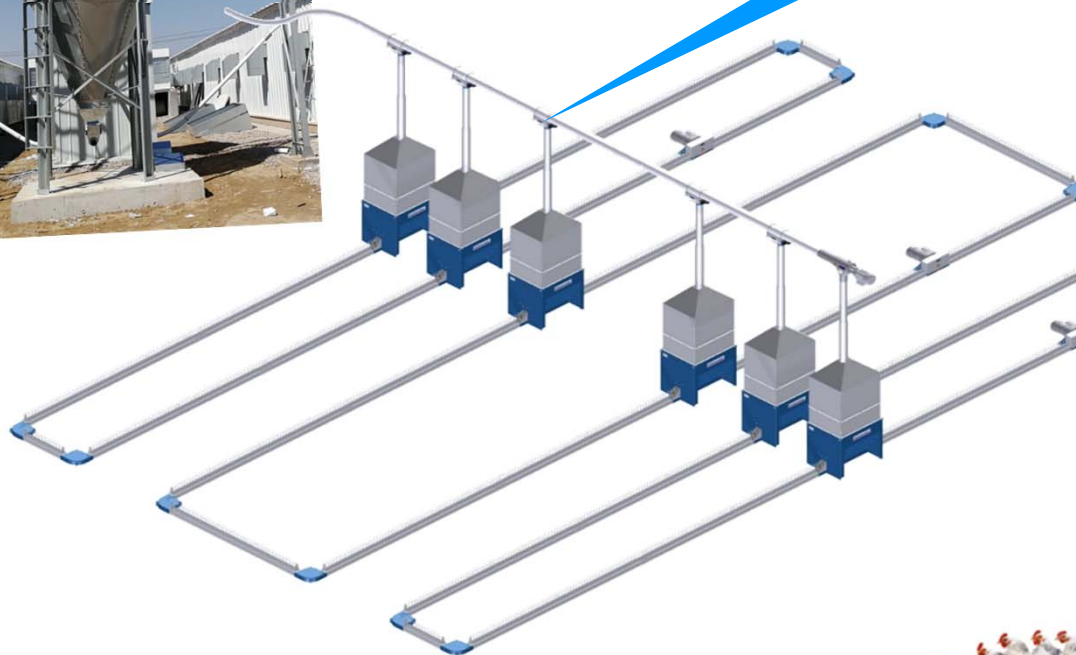


House weighing control panel



Daily feed distribution per two houses

Electric feed valve



## Farm feed transport bracket

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The feed transport bracket in the central farm is made of 275g hot galvanized sheet bending and double bracket, which is more stable.  
(instead of round iron pipe)



# Farm feed transport bracket

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The large-span truss for feed transportation in the center farm is made of 400mm aluminum alloy, which can span the chicken house with 17m and does not need to be supported on the roof (the roof support is easy to damage the house structure, resulting in poor sealing and waterproof problems).





# Silo and feed transport

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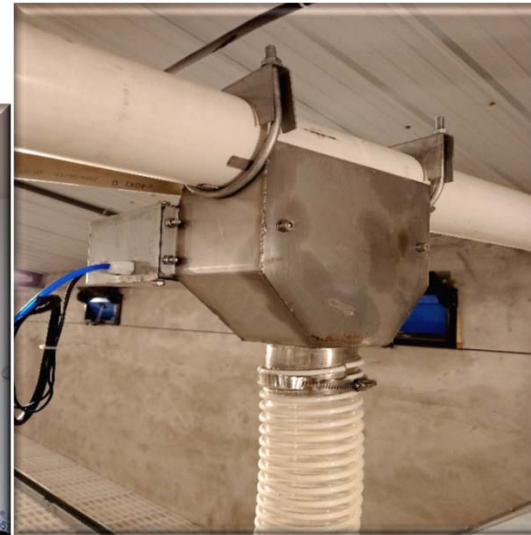
# Silo and feed transport

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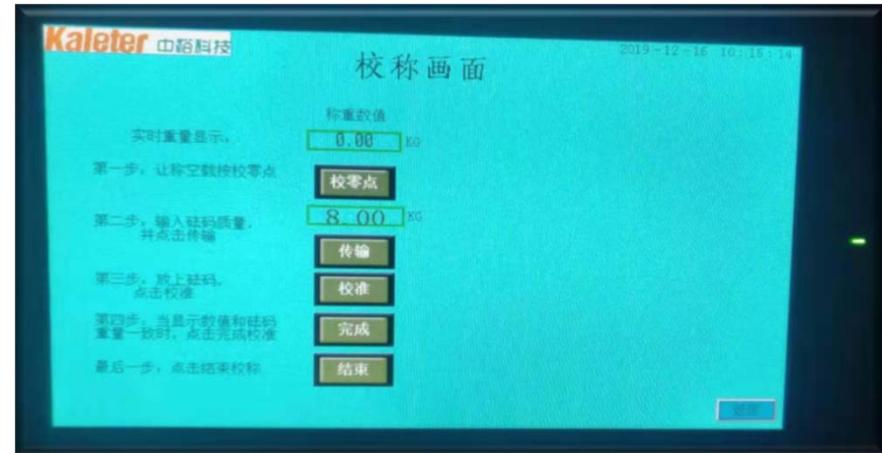
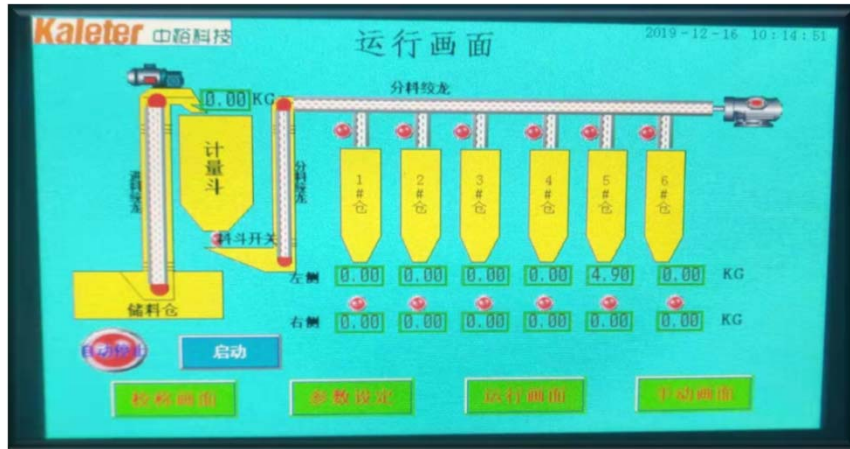


# Weighing system

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# Batch weighing controller



# Characteristics of weighing system

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## ■ Advantage

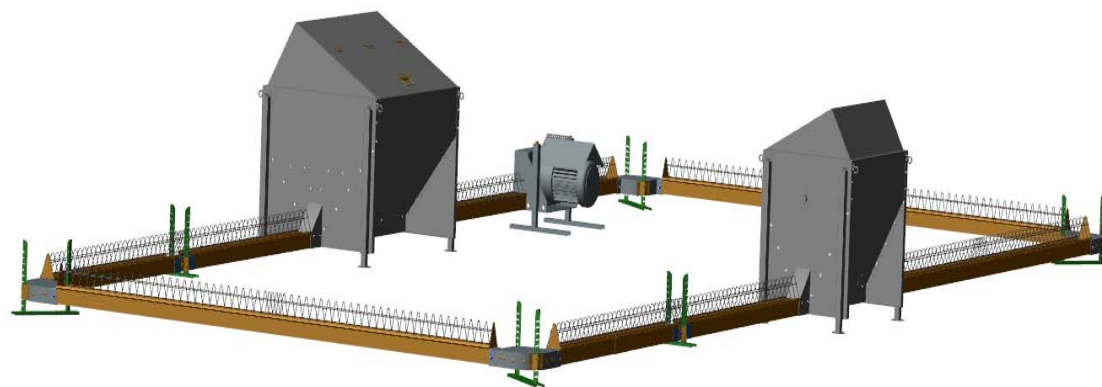
- The electronic batch weighing system is connected with the feed transport system, which can realize the far transport and accurate feeding of the central silo, daily silo and the house feed hopper.
- Control system: touch screen +PLC programming system.
- House feed valve: pneumatic valve, switch accurate and fast.
- Batch weighing: 20KG
- Higher accuracy: weighing feed bin error within 1‰, house feed hopper error within 3‰.
- Accurate weighing: ensure the accurate amount of feed, improve the feeding index, bring the maximum profit.



# Breeder chain feeding line

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- Advantages of chainfeeding systems in broiler breeder operations:
  - Easy to operate and to control systems
  - Visual check because of open systems
  - Easy and fast repair when needed, because of open systems
  - Separate feeding by means of the restriction grills
  - No feed selection by first birds on the feeding lines
  - Feeding without any stress for females / males
  - Better and higher performance figures for breeders



# Chain feeding line system

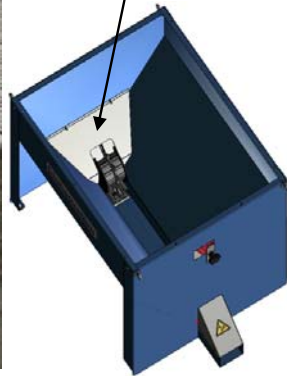
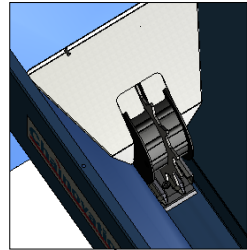
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- 1、 Speed controlled up to 36 m/min.
- 2、 Including separate sex feeding grills (no males at chainfeeders).
- 3、 Per each circuit 2 hoppers for fast filling distribution.
- 4、 Each cycle has 4 hoppers with content 300kg > daily feed content.
- 5、 175 gr/female bird maximum content.



# Chain feeding line hopper

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- It is made of high-quality hot-dip galvanized sheet material, the thickness of galvanized sheet is 1.2mm, and the thickness of zinc layer is 275g / m<sup>2</sup> on both sides.
- The two sides of the hopper are provided with shielding plates to prevent the feed from overflowing.
- The designed feed volume regulator and the feed volume of the hopper can be adjusted to 7 levels. Debugging by rotating the button is convenient and fast.
- The designed return wheel, nylon wheel valve and gear are made of hardened steel.

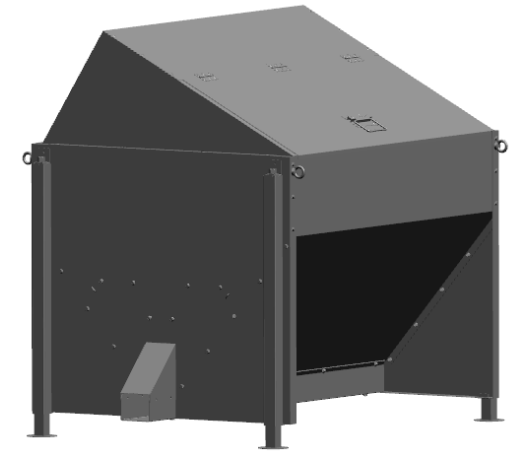



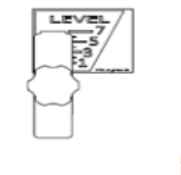


# Chain feeding line hopper

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1. The hopper is equipped with a feed level adjusting plate and a matching scale adjusting plate, which can intuitively and accurately adjust the feed level and control the discharge to meet the feeding requirements of chickens in different growth periods.
2. The whole hopper body is assembled with 1.5mm galvanized plate bolts with a surface zinc content of 275g, with good anti-corrosion performance.
3. The two sides inclined design is adopted for the lid of the hopper, which can effectively prevent chickens from perching and avoid feed pollution; The height of the leg can be adjusted, and the whole is hot-dip galvanized, with excellent performance.



Level control		Level	12 m/min	18 m/min	36 m/min
		1	375	563	1125
		2	408	613	1225
		3	500	750	1500
		4	643	965	1930
		5	787	1180	2360
		6	900	1350	2700
		7	1000	1500	3000

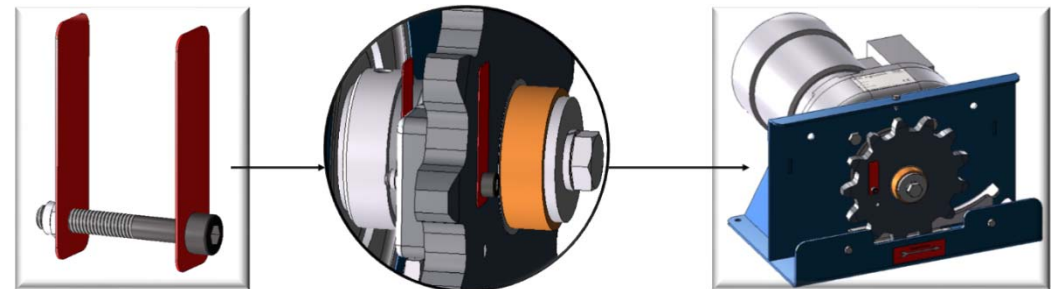
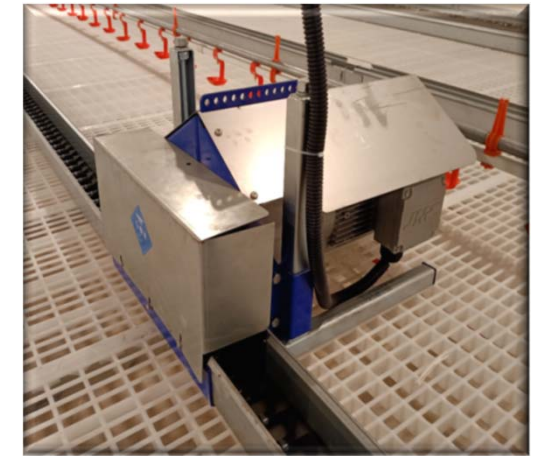
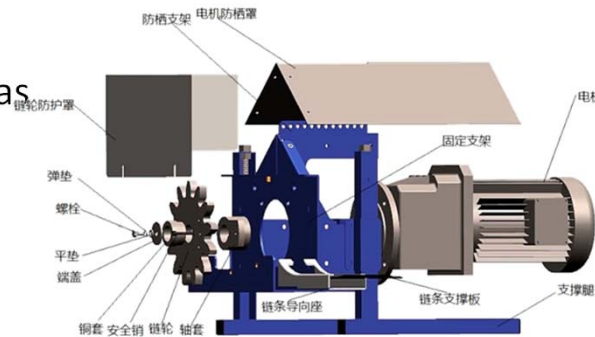
1125 kg/h  
= 18,75 kg/min  
= 520 gr/m



# Feeding system

## ➤ Direct drive mode

- The drive reducer adopts helical gear reducer, which has higher strength and driving efficiency and is free from maintenance.
- Placed anywhere in the feeding cycle.
- Motor with emergency stop function, prevent the occurrence of accidents can quickly stop the line running.
- Power:12-36m/min、2.2kw
- All motors are protected by safety bolts.
- The drive gear is machined with 45# steel, quenched hardness HRC50-52.



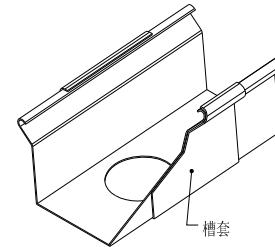
# Feeding system

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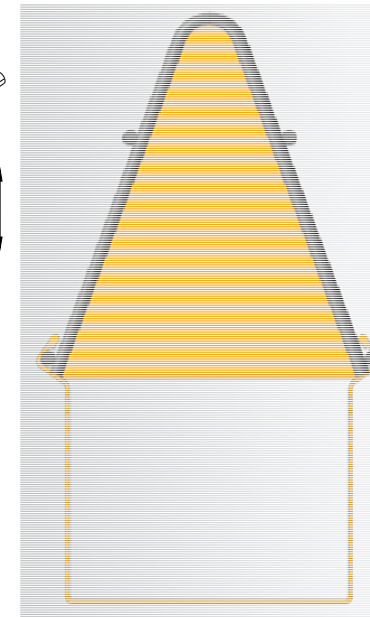
➤ The chain is imported from South Africa, and the material is high strength spring steel. Not easy to deformation, not easy to break.



➤ The feed restriction lattice is composed of aluminum zinc plated wire with a diameter of 4mm, 4-wire design, specification of 45x60-1500mm.



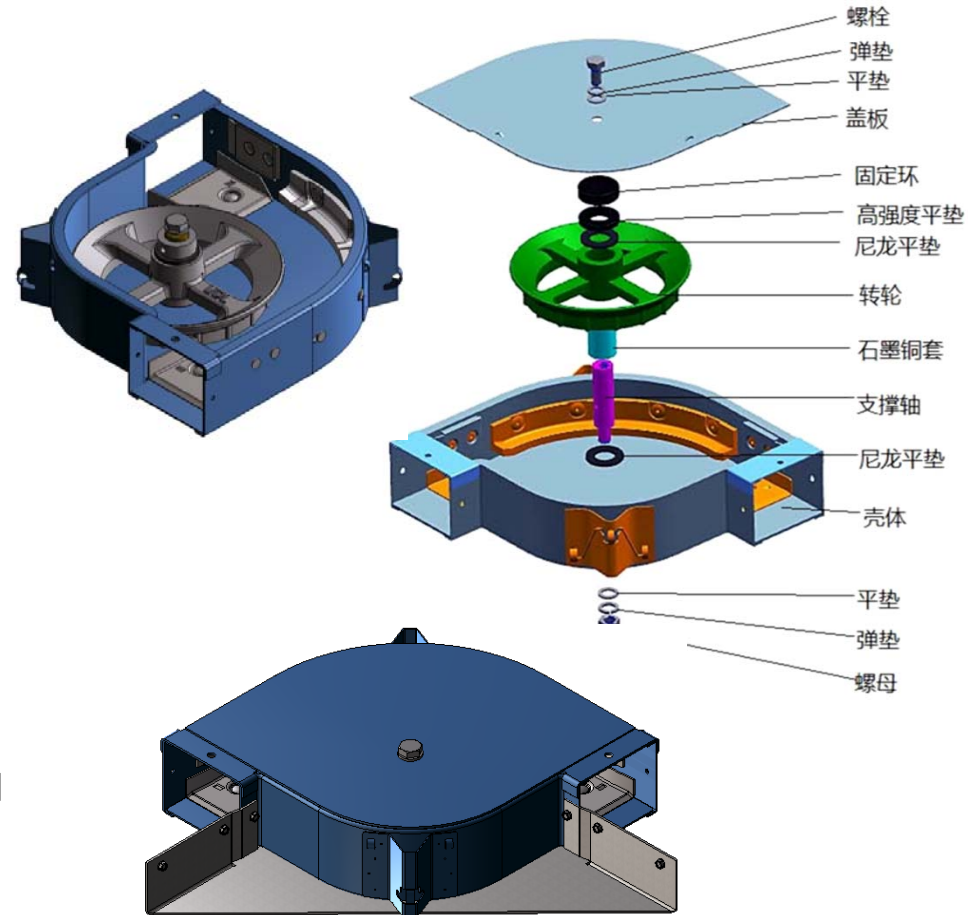
➤ The trough is made of 1.2mm thick galvanized metal plate, and the zinc layer thickness is 275g/m<sup>2</sup> on both sides.



➤ Lifting special trough and trough joint.



- The corner wheel is made of special high strength alloy steel with high hardness, wear resistance and long service life.
- The wheel shaft is high strength maintenance-free bearing, simple and convenient.
- The outer shell is treated with anti-static plastic spraying.
- Equipped with limited feeding end lid.
- The wheel is made of 45# cast steel and has excellent wear resistance with quenched hardness HRC50-52.
- The shaft is machined with bearing steel, quenching hardness HRC 58-60.
- The bushing is made of graphite copper bushing without lubrication.
- Wheel and bushing design compact structure, limited to avoid feed into the bearing.



# Corner wheel

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**Other companies**

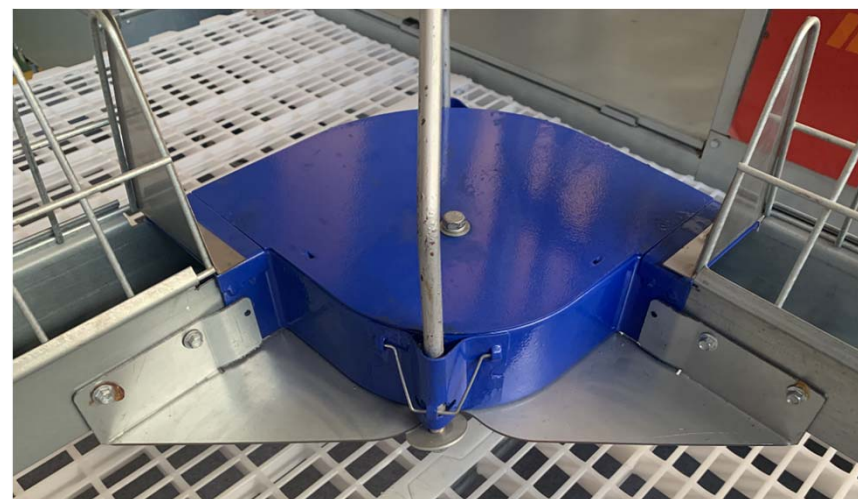


**Kaleter**



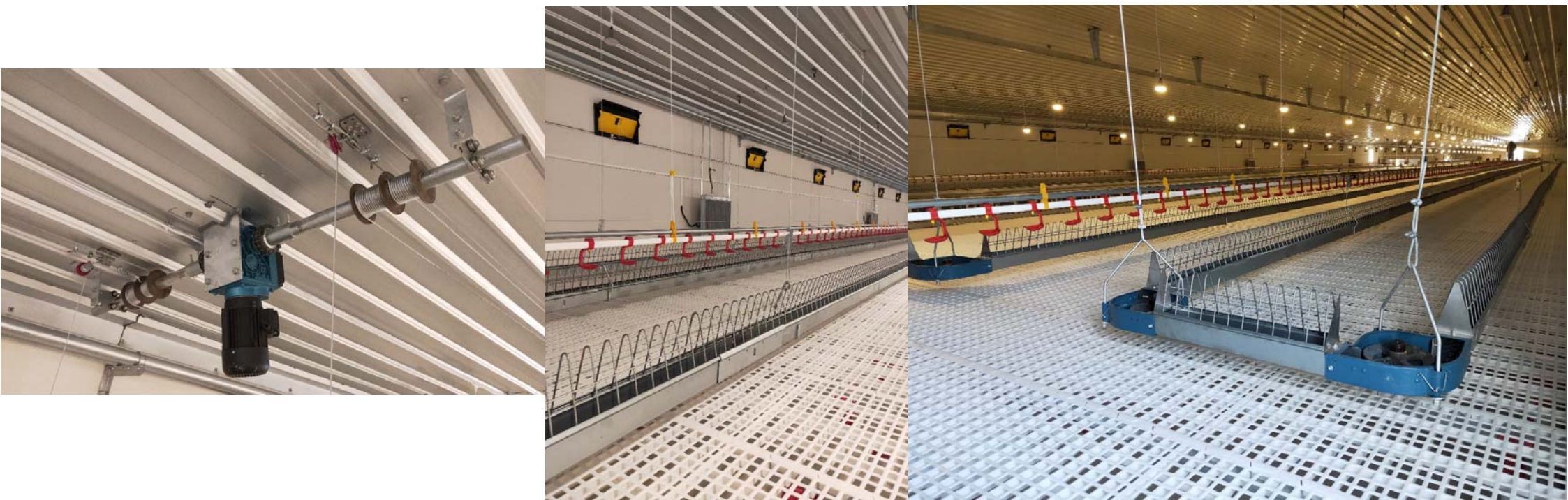
# Motor and corner wheel

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# Feeding system

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## Male feeder

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- Large diameter (37.5cm) grille design, to meet more chicken space.
- 12 gears adjustment to make the feeding more uniform.
- Fixed buckle prevents the feed pan from swinging





# Male feeding line

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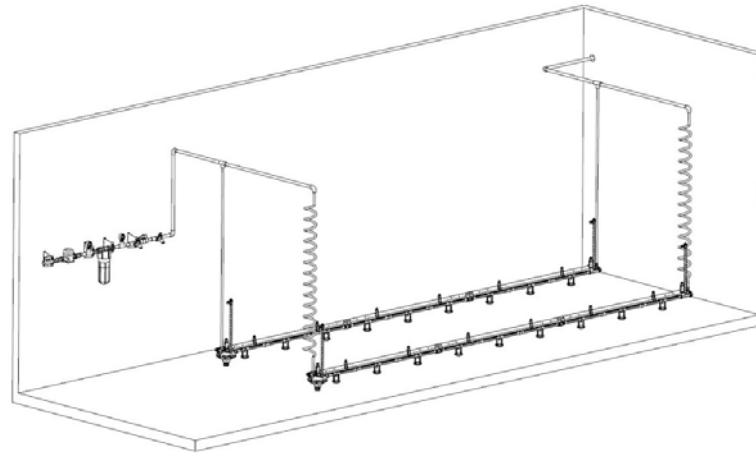
种类 档位	公鸡料盘/kg
1	0.361
2	0.404
3	0.456
4	0.535
5	0.572
6	0.657
7	0.723
8	0.815
9	0.908
10	1.018
11	1.116
12	1.253

Electric lifting system



畜禽养殖整体解决方案

## • Drinking system



# Drinking system rearing / production

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- 1、 World leading nipple drinking systems designed to meet the needs of Breeders and guarantee you optimum performances.
- 2、 This simplicity contributes to the proven successful leak proof operation.
- 3、 2 water lines, one on the left and right floor, 12 nipples /3m ,total 912 nipples, 114m length, 8 chickens per nipple, using a sealed ring type connection , with a single arm water cup.
- 4、 28\*28 square pipe to prevent the shortage of water supply at the end.
- 5、 Each lines individual suspended with manual to operate winch.
- 6、 Water filled gap releases liquid at the slightest touch of the pin, facilitating use by baby chicks.
- 7、 The nipple responds at any angle.

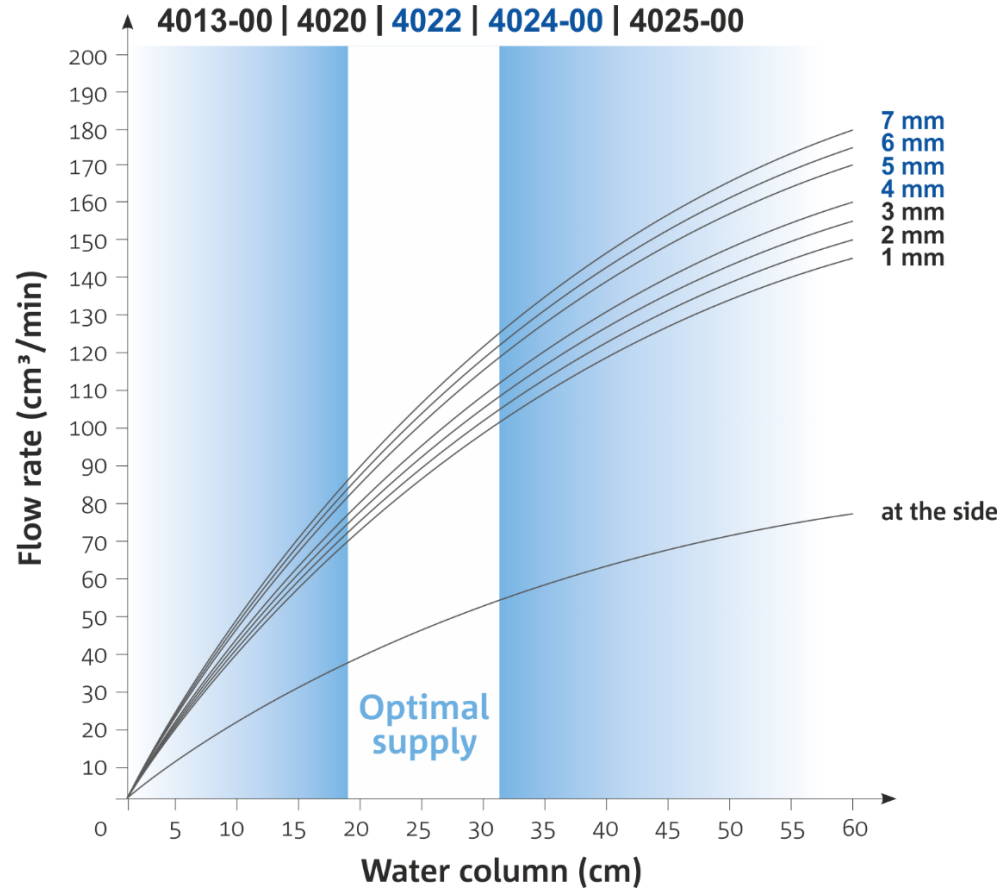


# Drinking system rearing / production

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4024 nipple



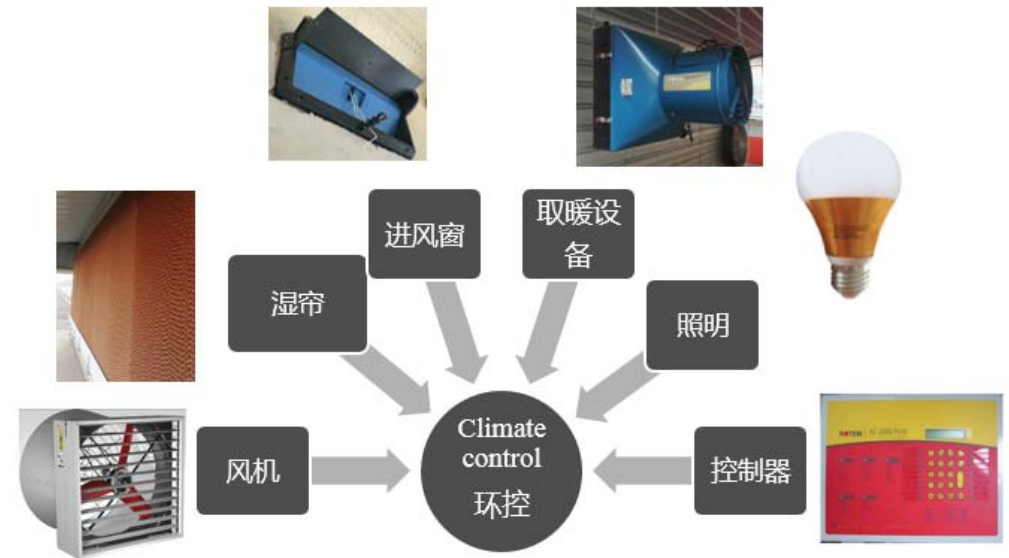
畜禽养殖整体解决方案

- **Climate control systems**

# Climate control systems per house

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- Ventilation system (Max&Min ventilation)
  - Airinlet system
  - Air exhaust system
- Cooling/humidification system
  - Pad Cooling System
  - Nozzle humidification system
- Heating system
- Climate control equipment
- Central climate control system



# Climate control systems per house

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- **Chicken house climate control info:**

- Air exchange based on the bodyweight of the birds in the house as per the temperature curves advised mostly by the breeding companies.
- Min ventilation pattern realised by speed control.
- Max ventilation pattern realized by tunnel mode system.
- Air volume controlled by automatic inlet / exhaust systems (= ventilation system) based on underpressure (25 pascal).
- Air temperature is recorded and as basic adjusted when needed.
- Air humidity is recorded and when possible it is adjusted.
- Air quality (CO<sub>2</sub>) is when possible mainly recorded / only indirect adjusted.
- Under pressure is recorded and could be adjusted.
- Local ambient climate conditions can of course effect the climate conditions inside the houses.



# Climate control systems per house

- General info:  
Minimum air volume request for per chicken

**Table 20:** Approximate minimum ventilation rates per bird.

Age	Cubic Meter per Hour (CMH/bird)	Cubic Feet per Minute (CFM/bird)
1-8 weeks	0.16	0.10
9-15 weeks	0.42	0.25
16 – 35 weeks	0.59	0.35
36 weeks - depletion	0.76	0.45

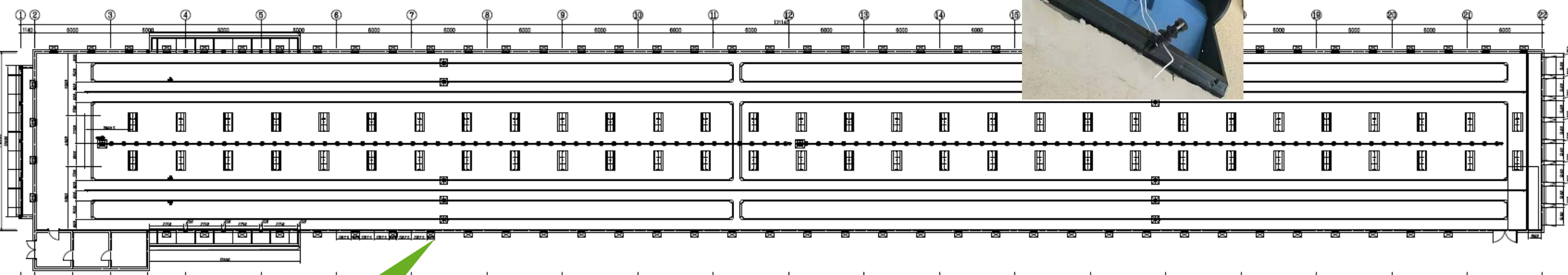
9183birds x 0.76 m3/h =  
6979m3/h  
Minimum level during  
production





# Climate control systems per house

- Min ventilation:
- Winter ventilation system = min ventilation system



Airinlets  
80个 x 1840 m3/h  
(With a hood)

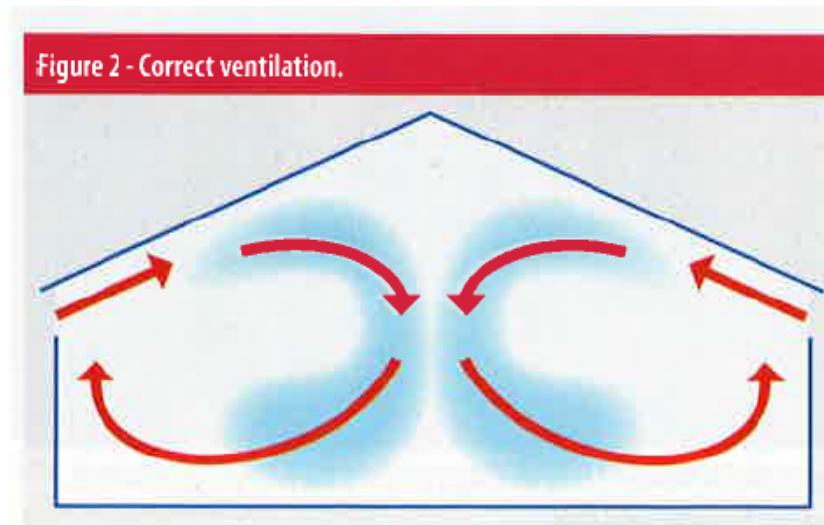
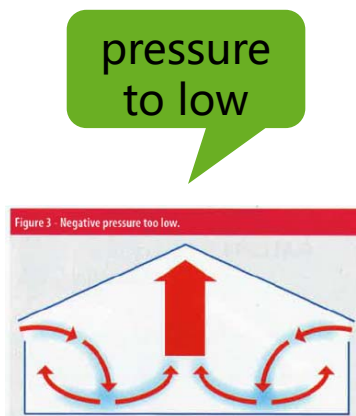


Airinlets control:  
motor+Manual opening device



# Climate control systems per house

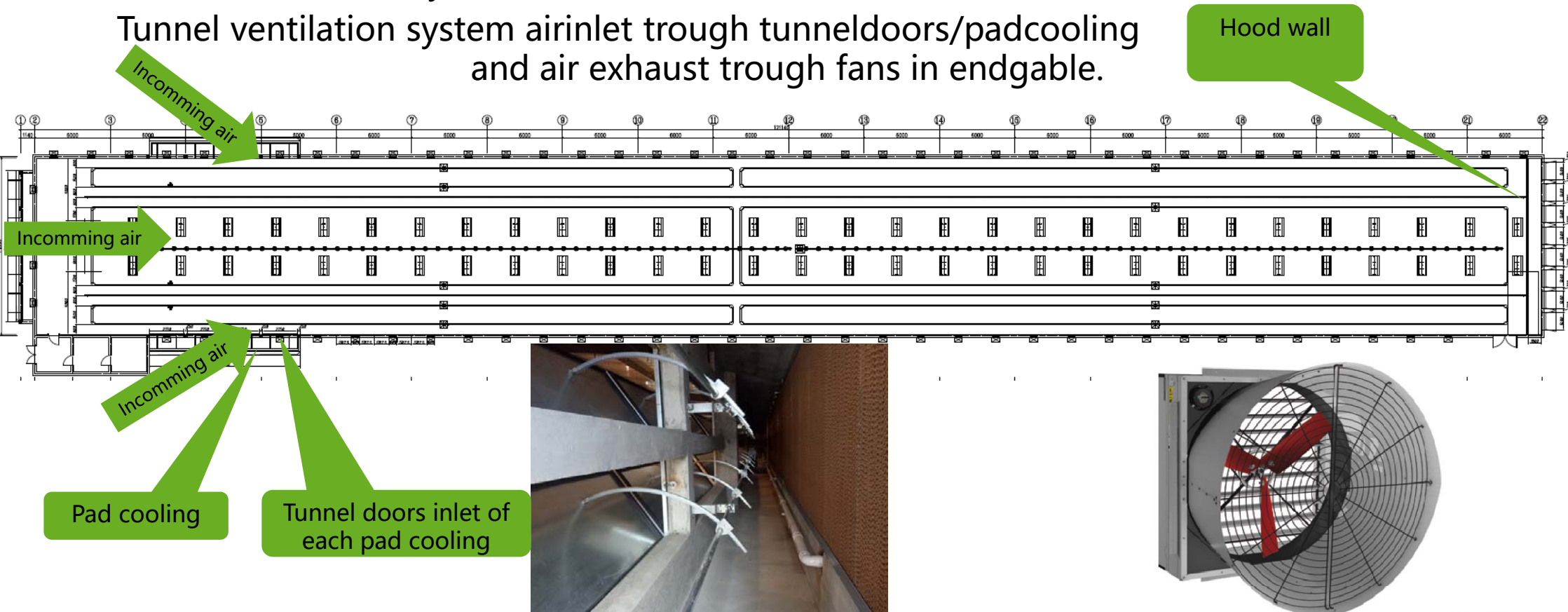
- Min ventilation system:
- Min ventilation best air flow pattern
  - Controlled mainly by the proper under pressure



# Climate control systems per house

- Max ventilation system:

Tunnel ventilation system airinlet trough tunneldoors/padcooling and air exhaust trough fans in endgable.



# Fan with butterfly valve

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Characteristics

0 Pa  
50 Pa

54000 m<sup>3</sup>/h  
42600 m<sup>3</sup>/h



# Climate control systems per house

- Nozzle cooling/humidification system:

- The nozzle system is only for humidification purpose
- Each nozzle has its own saddle placed during installation
- The central pump works on 30-50kg, This gives less problems with blocked nozzles



微雾喷嘴使用数据

喷头 NOZZLE		压力 PRESSURE					
喷嘴 型号	尺寸	400PSI	500PSI	700PSI	800PSI	900PSI	1000PSI
		28kg/cm <sup>2</sup>	35kg/cm <sup>2</sup>	49kg/cm <sup>2</sup>	56kg/cm <sup>2</sup>	63kg/cm <sup>2</sup>	70kg/cm <sup>2</sup>
#01	0.15mm/0.006"	0.029	0.033	0.038	0.041	0.044	0.046
#02	0.2mm/0.008"	0.056	0.063	0.074	0.08	0.084	0.089
#03	0.3mm/0.012"	0.092	0.103	0.122	0.13	0.138	0.145



# Climate control systems per house

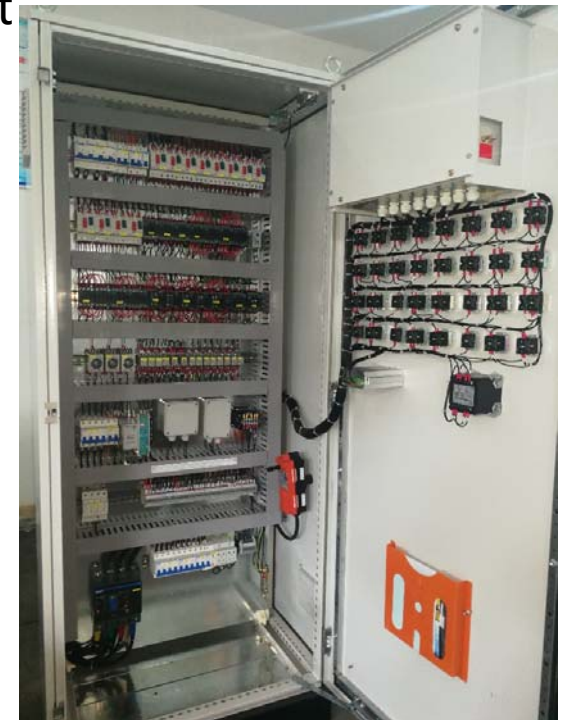
- Climate control equipment:
  - Control by modern automatic to adjust control equipment



Climate control computer



Alarm components



Control cabinet



# Climate control systems per house

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- Climate control equipment:
  - Different type of sensors offered in this project
    - Inside temperature sensors
    - Outside temperature sensor (in central network only)
    - Inside analoge humidity sensor (with connector)
    - Inside CO2 sensor (0 - 5000 PPM)
    - Inside pressure sensor

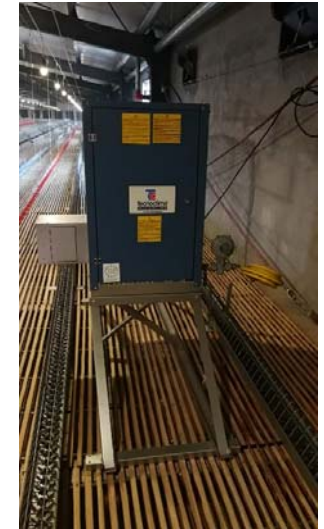


# Climate control systems per house



## ■ Heating requirements

birds		0.800 m <sup>3</sup> /h/kg		Transmission losts							Balance
weight	Temperatu	min. vent.	heat prod.	lost by wall	lost by roof	lost by floor	lost by	heat	Watt	Kw required	
(gram)	(°C)	(m <sup>3</sup> /h/bird)	(W/animal)			(min 5°C)	ventilation	by birds	required/h	per hour	
50	35	0.04	0.18	36,171	78,335	50,400	6,100	1,794-	169,213	169	
birds		0.600 m <sup>3</sup> /h/kg		Transmission losts							Balance
weight	Temperatu	min. vent.	heat prod.	lost by wall	lost by roof	lost by floor	lost by	heat	Watt	Kw required	
(gram)	(°C)	(m <sup>3</sup> /h/bird)	(W/animal)			(min 5°C)	ventilation	by birds	required/h	per hour	
4000	18	3.2	14.4	22,506	48,742	21,840	303,665	143,539-	253,214	253	

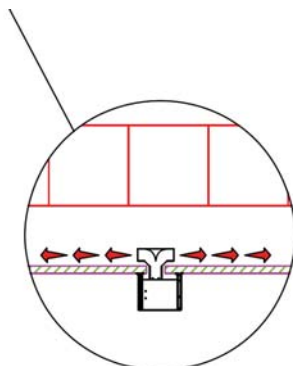
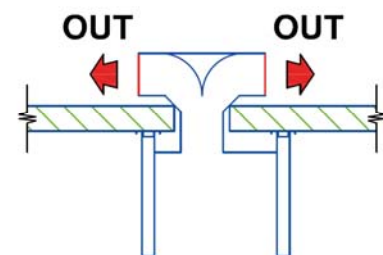
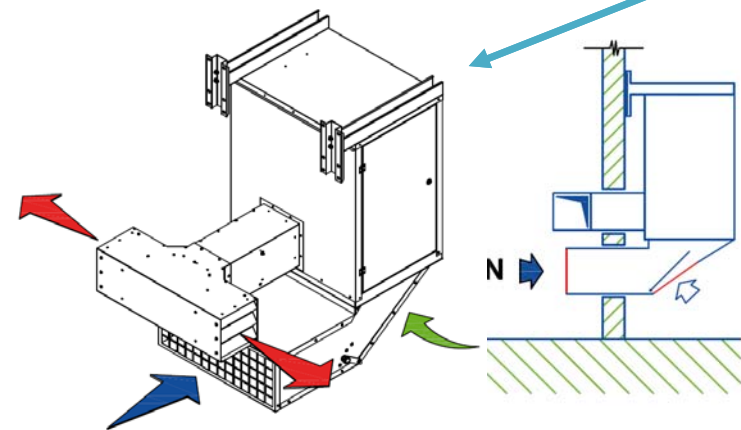
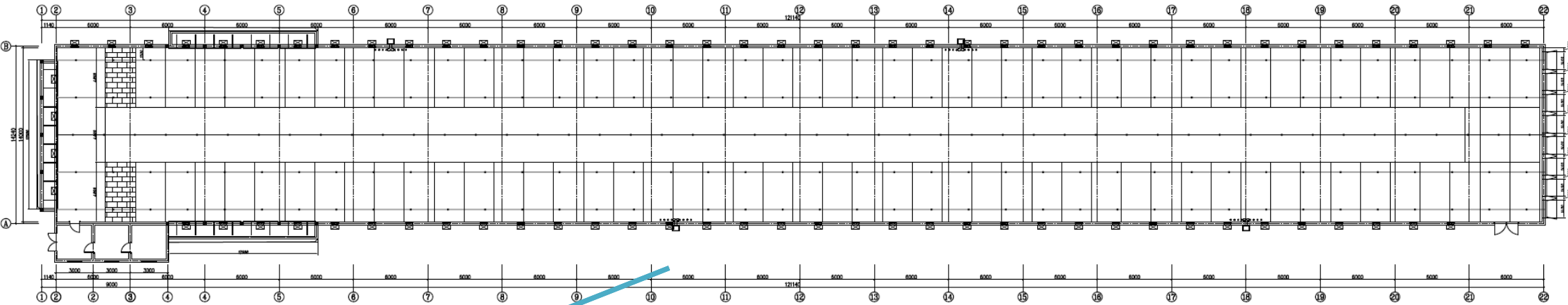


Model	Unit	SUPERCIKKI 80
Heating capacity ouput	kW	80,0
	kcal/h	68,800
Air flow rate	m <sup>3</sup> /h	2,000
Temperature deviation	K	135
Air throw	m	30
Monophase electric supply	L+N+E	230V - 50 Hz





# Climate control systems per house



The gas heater is installed outdoors, which does not consume indoor oxygen, and the CO<sub>2</sub> produced is directly discharged to the outdoors. The heating mode can be fresh air mode, indoor circulation mode and mixing mode.



# Lighting system rearing / production

- Lighting system with following specifications:
  - Each bulb 7W, 96V, 3 years warranty
  - Each bulb dimmable from 100 % - 0 %
  - Class of protection minimum IP67
  - Light intensity 5-60lux
  - Perfect light distribution stimulate the mating in litter.



HATO E27 cable



IUL-27



OAI-27



HATO ring



PSH2

Type	Power consumption	Light output	Efficacy	CCT	CRI
Warm white	7W	790lm	112.9lm/W	3000K	> 80
Cold white	7W	884lm	126.3lm/W	4500K	> 80
Warm white + UV	7W	754lm	107.8lm/W	3000K	> 80



# Lighting system rearing / production

- Lighting system with following specifications:
  - Each bulb 9W, 220V, light Angle 270°
  - Dimmable between 1 – 100 %
  - Class of protection minimum IP65
  - Light intensity 5-60lux
  - 4 rows of bulbs, per line 67 lamps
  - Perfect light distribution stimulate the mating in litter.

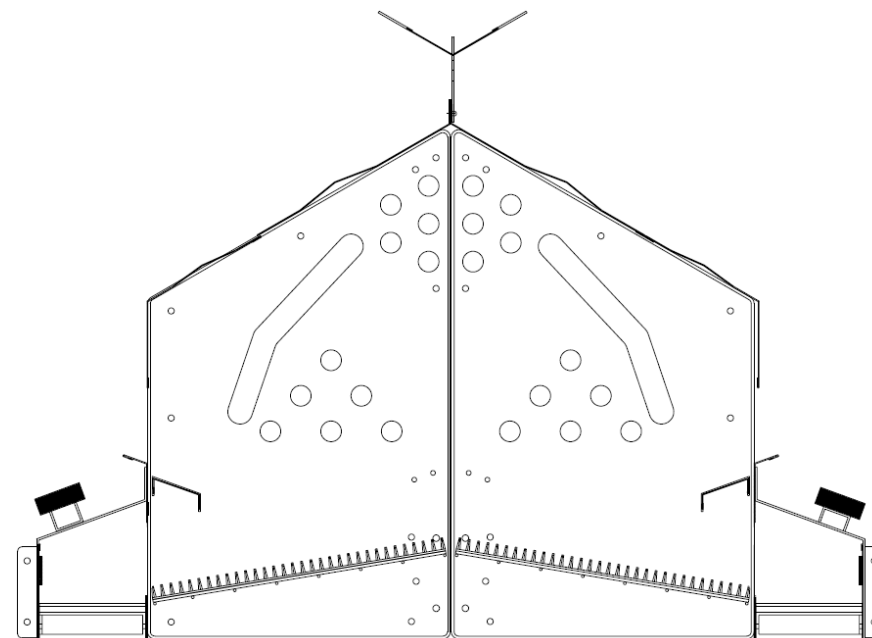


# Automatic egg collection nests

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Standard B (could be lifted)

Egg nest (both sides collection)	
Dimension	2240 (2455) *915*640mm
Holes	16
Width of belt(mm)	100
Delivery speed	6m/min(could be adjusted)
Max distance	120m
Nest size	280 (300) *320mm
Collection way	both sides



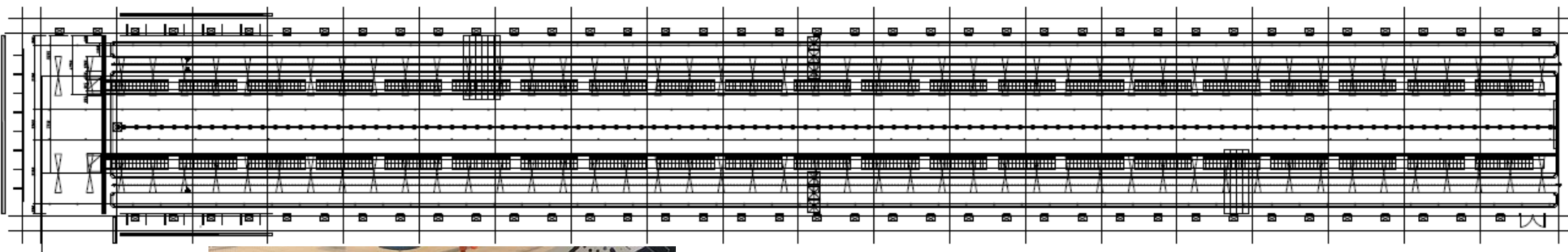
# Automatic egg collection nests

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# Automatic egg collection nests

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Double belt egg collection table

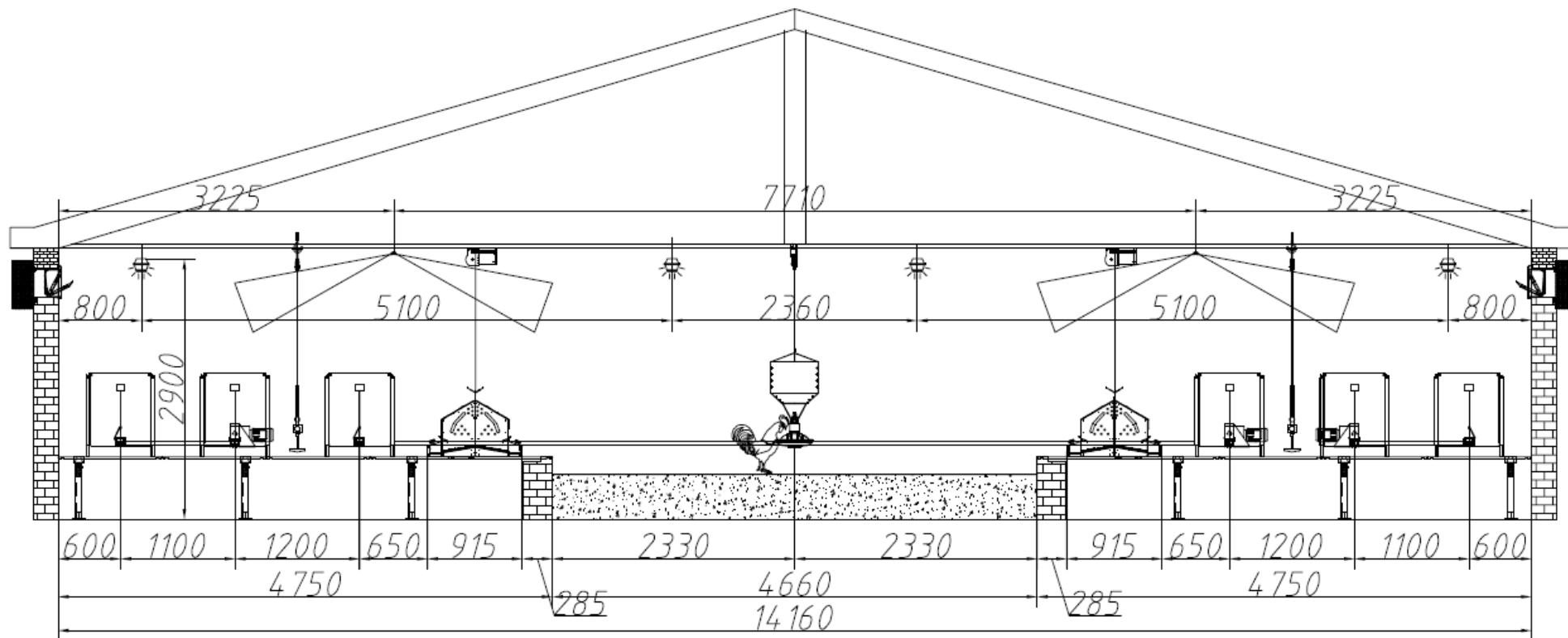


Egg collection box on both sides



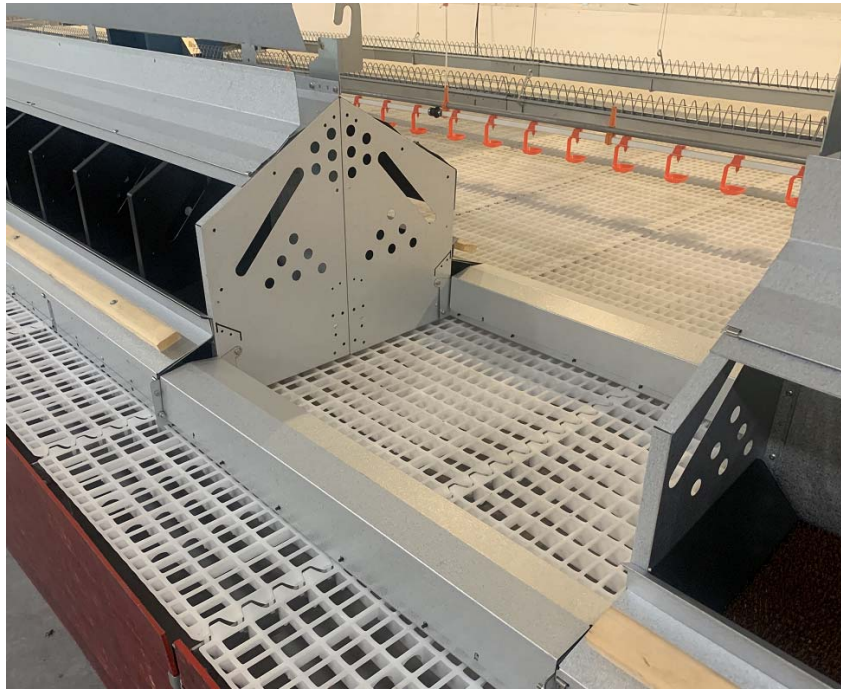
# Automatic egg collection nests

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# Automatic egg collection nests

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every two units of egg nest  
install 1 passage

The end





# Automatic egg collection nests

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High quality sylphard pine pedal is installed above the egg belt

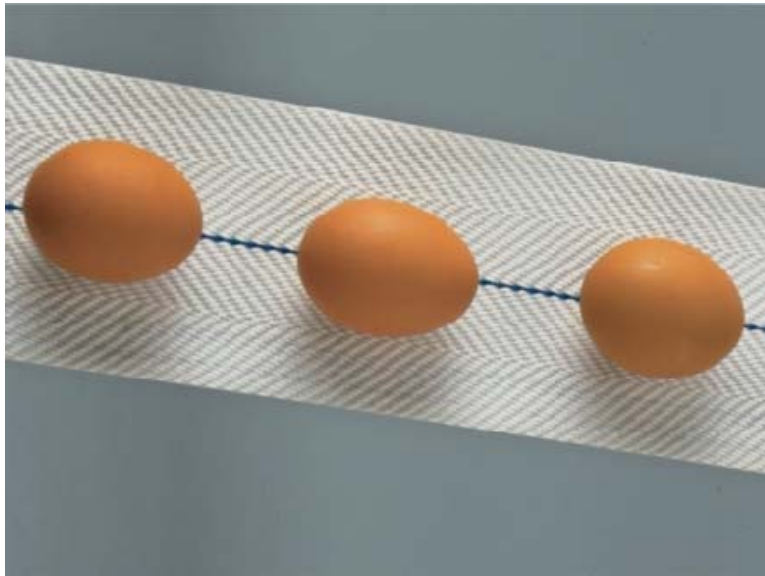


Open type egg collecting trough



# Automatic egg collection nests

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Nylon egg belt, high strength and low ductility, effectively reduces the rate of broken eggs and facilitates egg cleaning. The outer side of the egg belt is added with cushioning rubber strip to further reduce the production of dark grain eggs.



Imported artificial straw mat, durable use without deformation, and conducive to ventilation in the egg nest



# Automatic egg collection nests

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Black ABS board, conducive to attract chickens into the egg box, and no sharp parts, to prevent damage to chickens and eggs



Equipped with artificial egg box lid



# Automatic egg collection nests

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The top of the egg box is equipped with a anti habitation board



Equipped with egg box lifting system, cleaning hen house and brood rearing period without disassembling egg box



# Automatic egg collection nests

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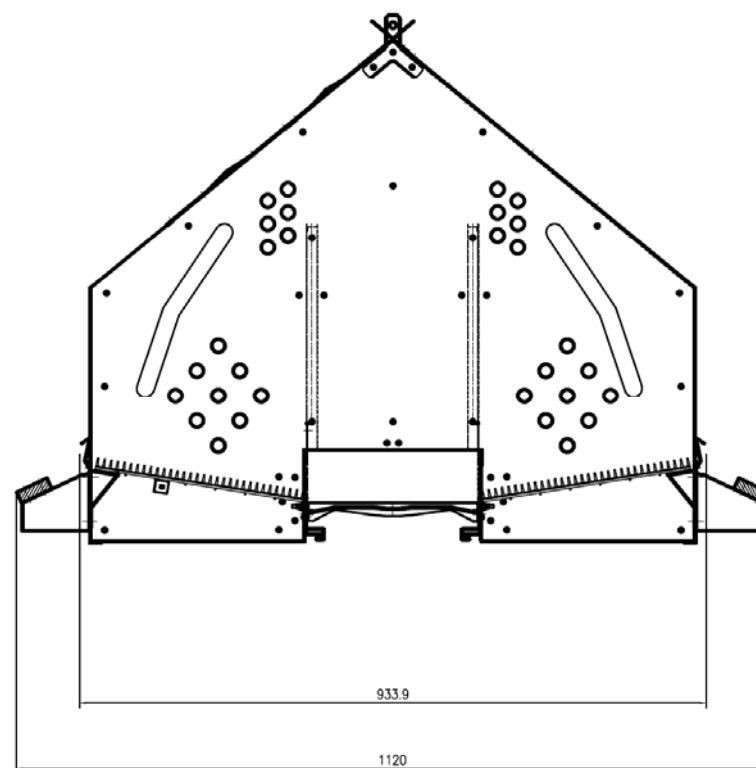


# Automatic egg collection nests

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Standard B (could be lifted)

Egg nest (middle collection)	
Dimension	2240*1120*620mm
Holes	16/20
Width of belt (mm)	250
Delivery speed	6m/min could be adjusted
Max distance	120m
Nest size	320*280mm (depth*width)
Collection way	middle collection



# Automatic egg collection nests

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# Plastic floor

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- Specially designed for breeders, size 1000\*482\*37mm.
- Hole 44\*18mm、 More conducive to manure leakage.
- PP pure raw material processing, longer life.
- Anti-aging, anti-ultraviolet, color can be customized.
- Arc design is more convenient for washing.
- Two sizes, more reasonable installation, to meet the needs of different laying.
- With splicing bayonet, higher firmness.
- The height of the upper leg connector can be adjusted to 10cm to solve the problem of uneven ground during installation.
- Galvanized flat steel beams are strong and durable.



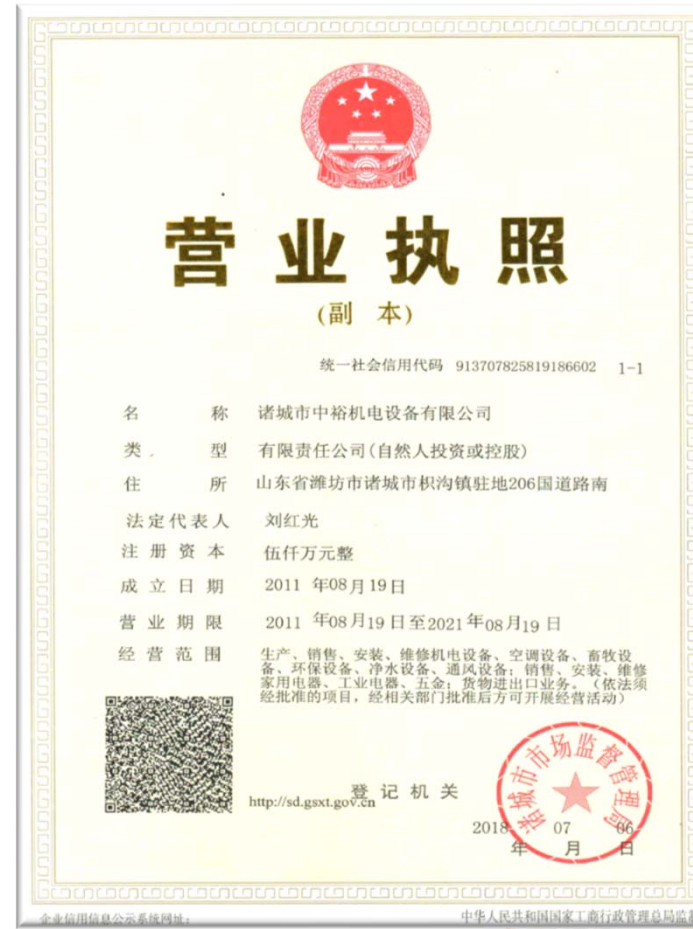


# Plastic floor

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# Certification



畜禽养殖整体解决方案

- Cases

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## Chia Tai Group Hengshui broiler breeders project



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## Chia Tai Group Hengshui broiler breeders project



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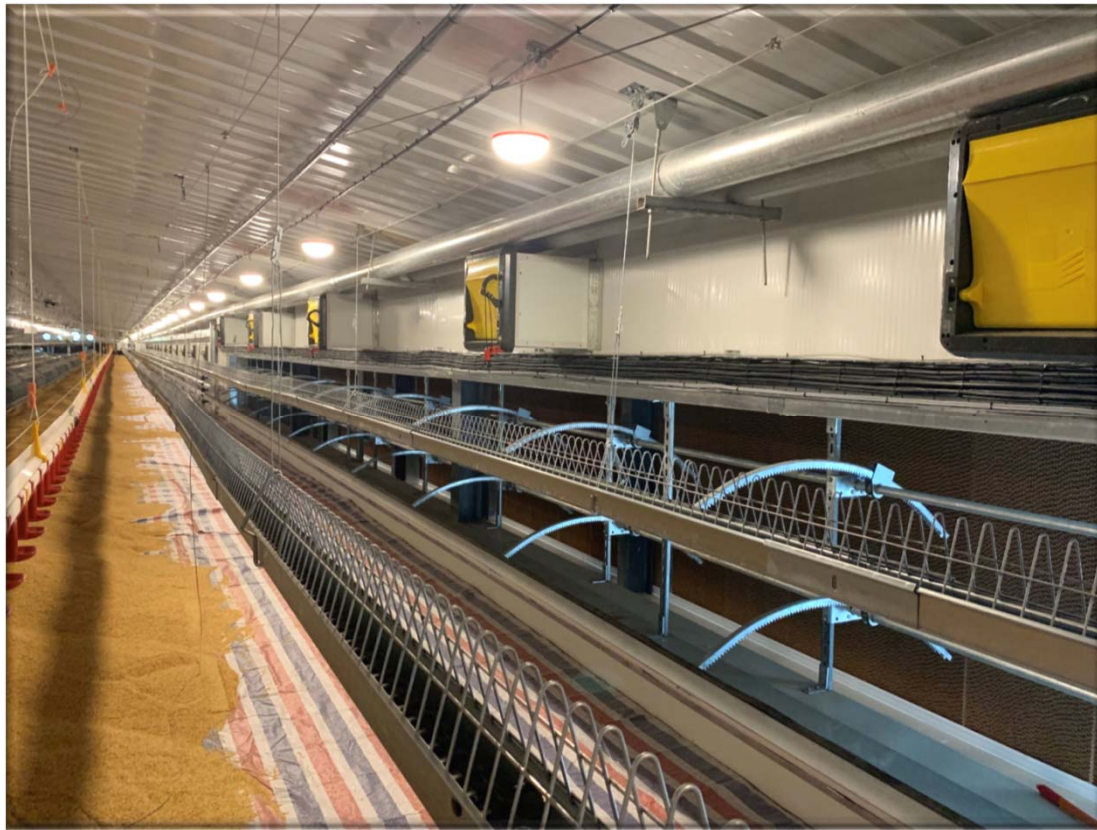
## Chia Tai Group Hengshui broiler breeders project



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## Chia Tai Group Hengshui broiler breeders project





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## WENS Group Guannan broiler breeders project



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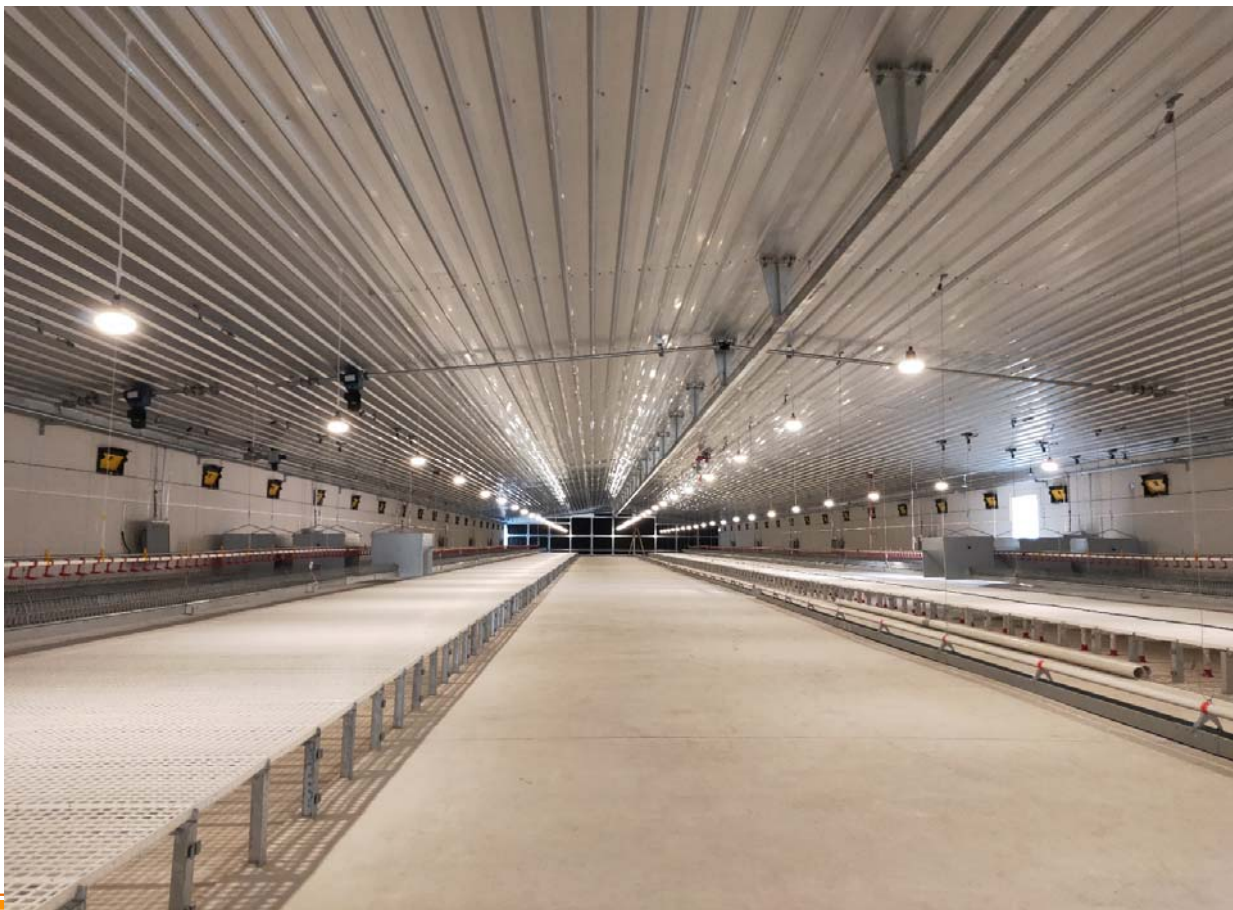
## WENS Group Guannan broiler breeders project



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## Jiangsu Jinghai broiler breeders project



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## Henan Yueqin project



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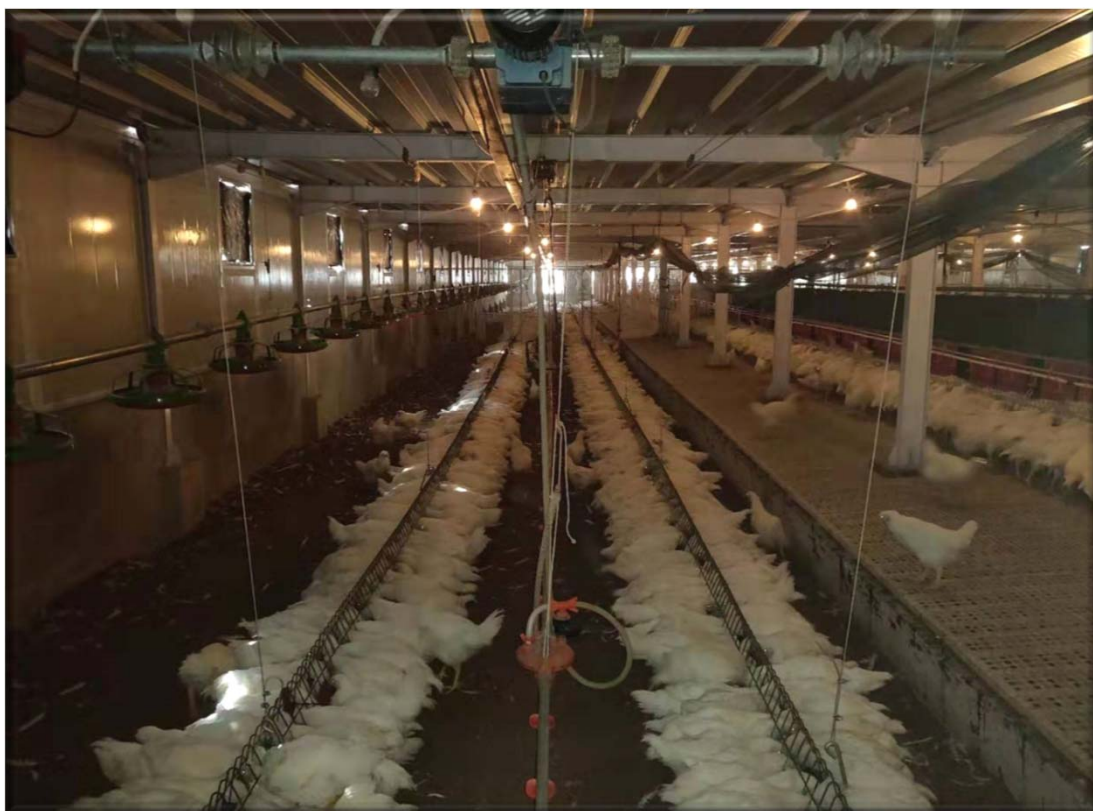
## Henan Yueqin project



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## Indonesian parental generation broiler breeders project



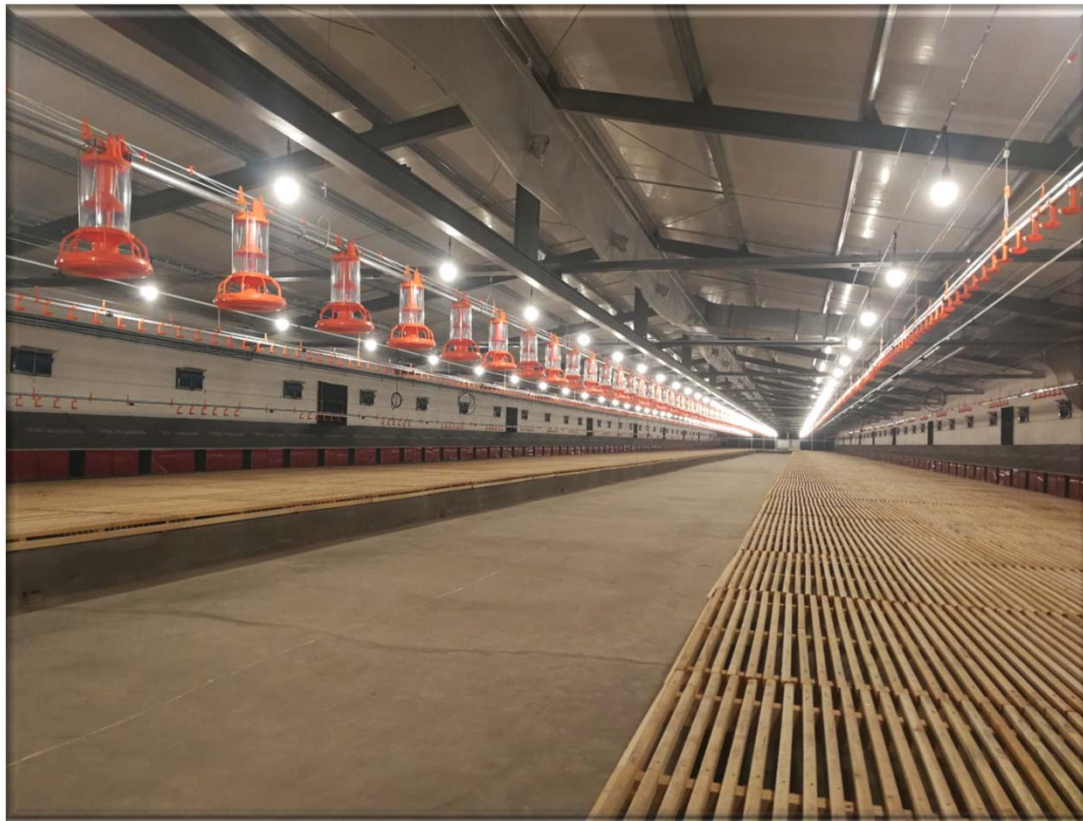
# Introduction to relevant cases

## Xinjiang Kunlun Nia broiler and egg breeders



# Introduction to relevant cases

## Zhucheng Waimao progenitor broiler breeders



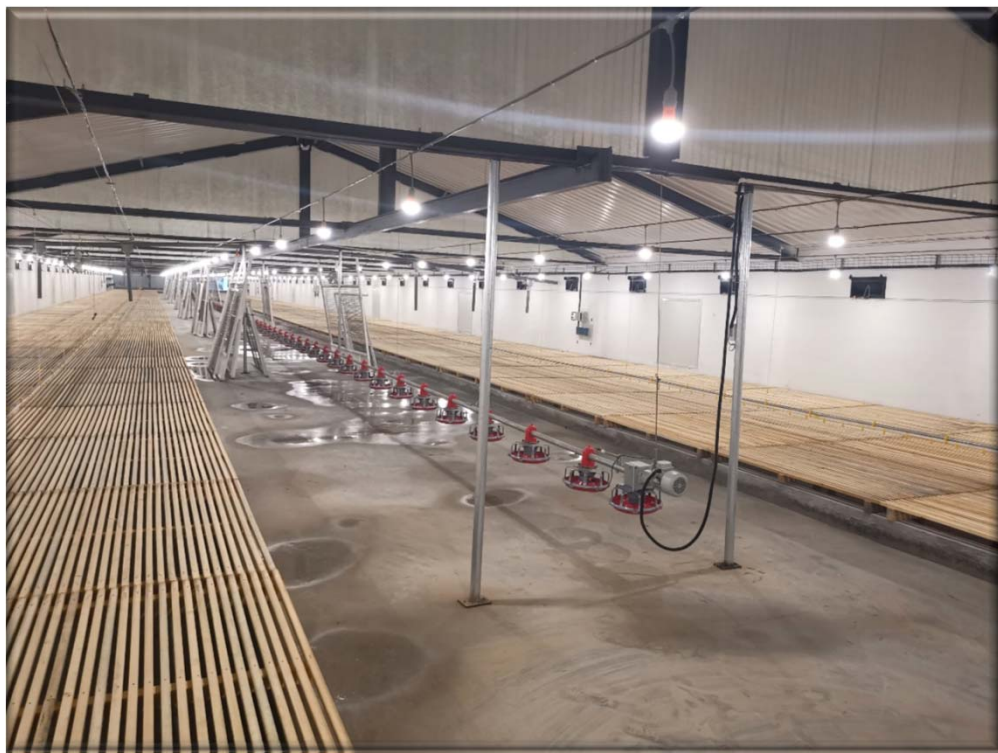
# Introduction to relevant cases

## Zhucheng Waimao progenitor broiler breeders



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## Zhucheng Waimao progenitor broiler breeders





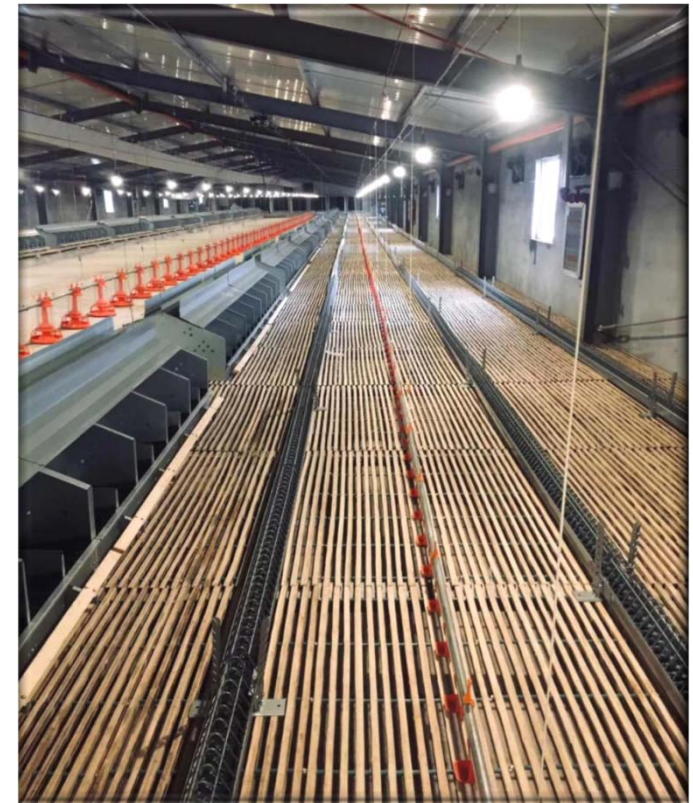
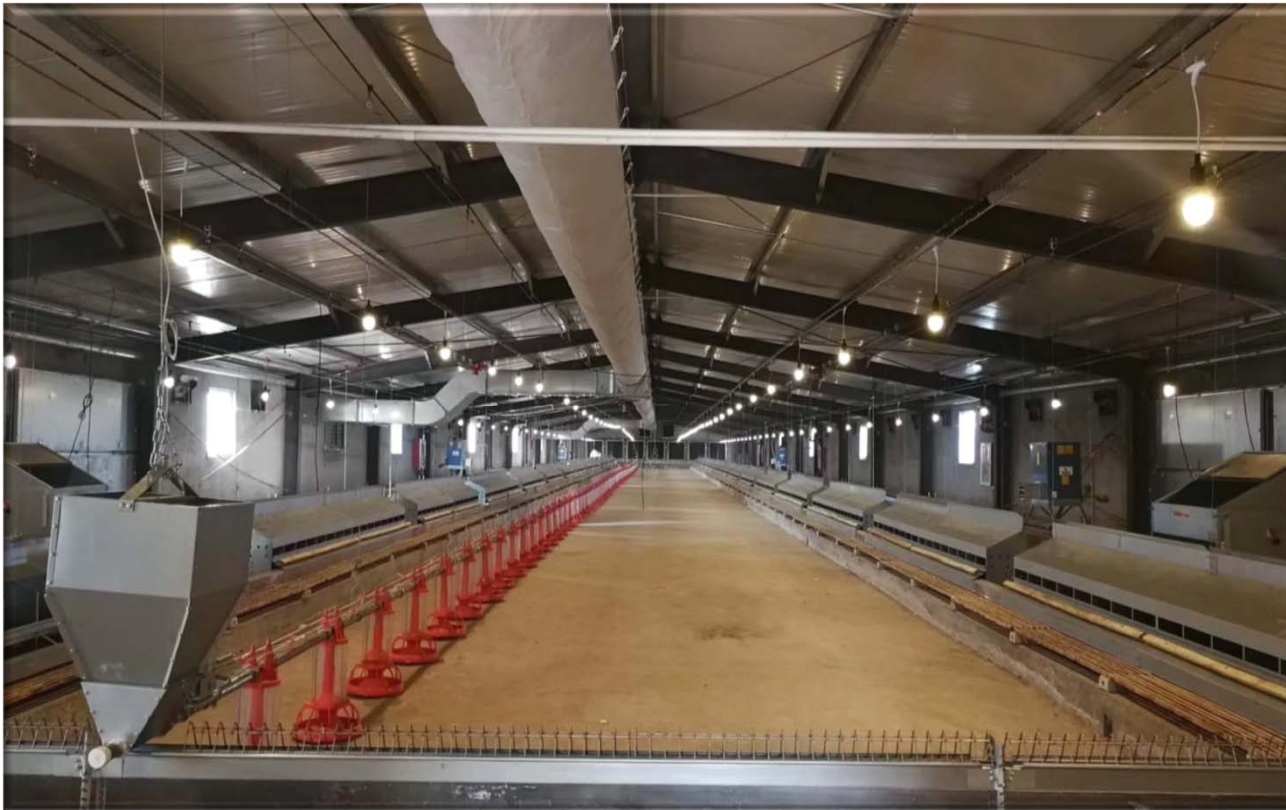
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## Jiangsu Huashi parental generation broiler breeders



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## Guangrao Huayu parental generation broiler breeders



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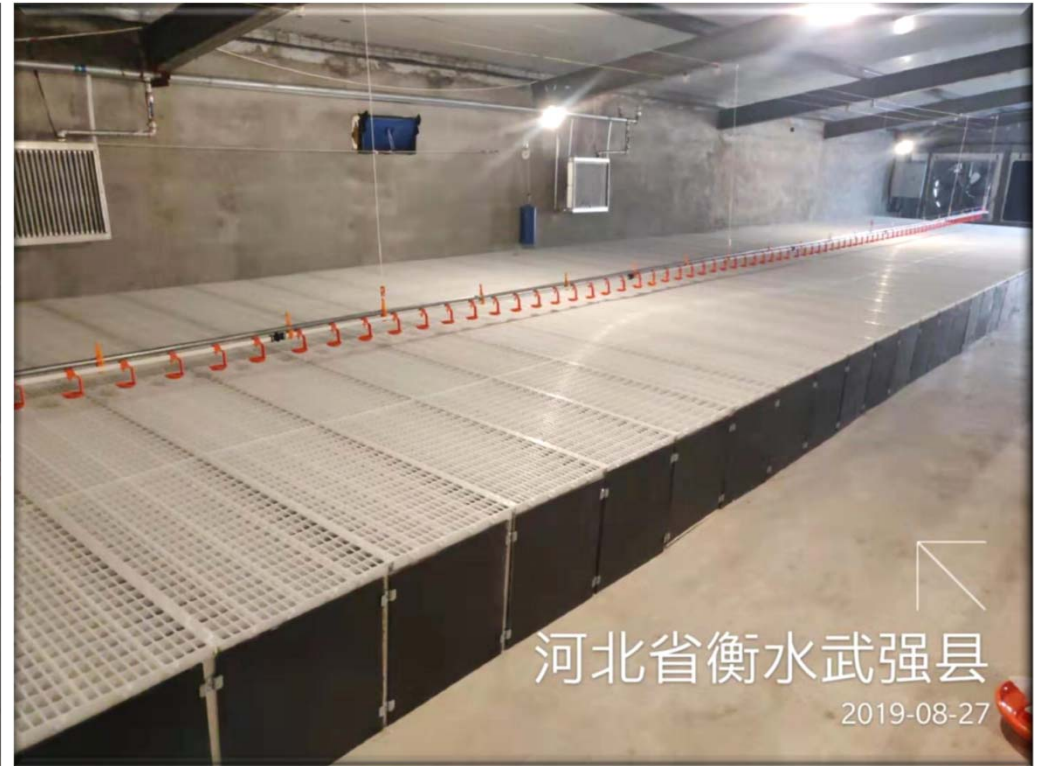
## WINS Group Taian parental generation broiler breeders



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## Zhonghong Sanrong parental generation broiler breeders



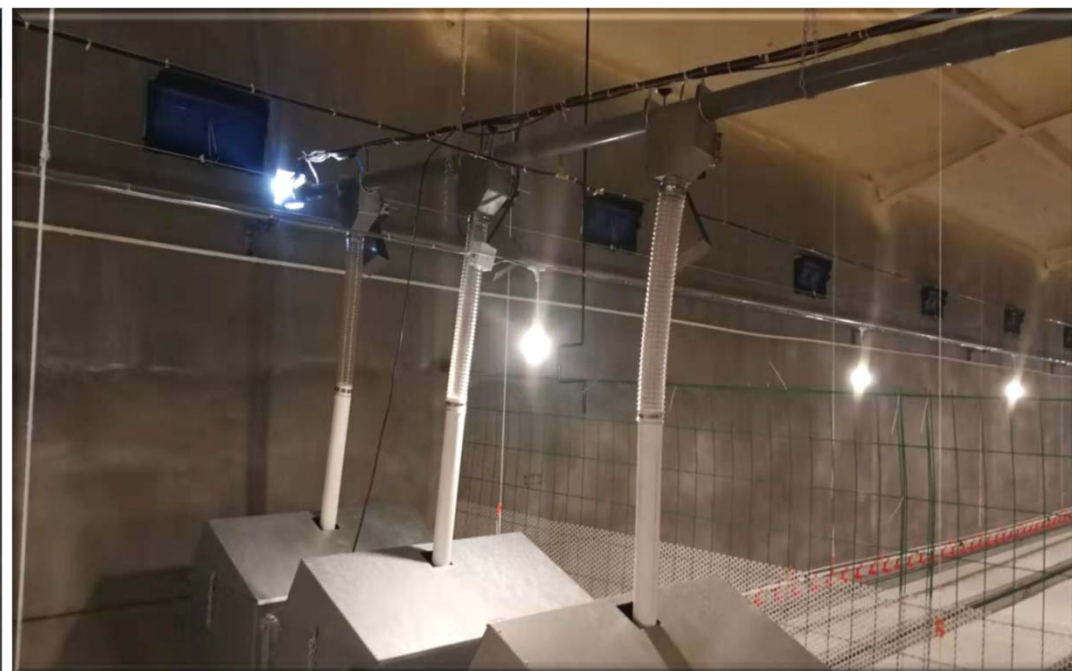
河北省衡水武强县

2019-08-27



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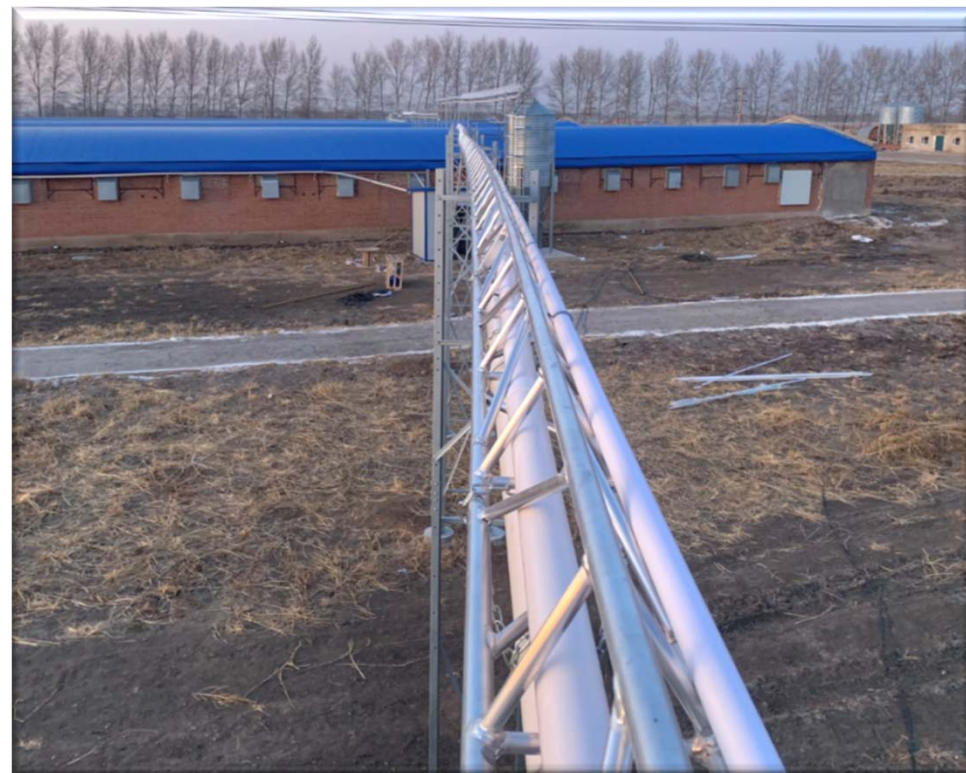
## ECO Group parental generation broiler breeders



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## Jilin Deda parental generation broiler breeders



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## Zhucheng Waimao parental generation broiler breeders



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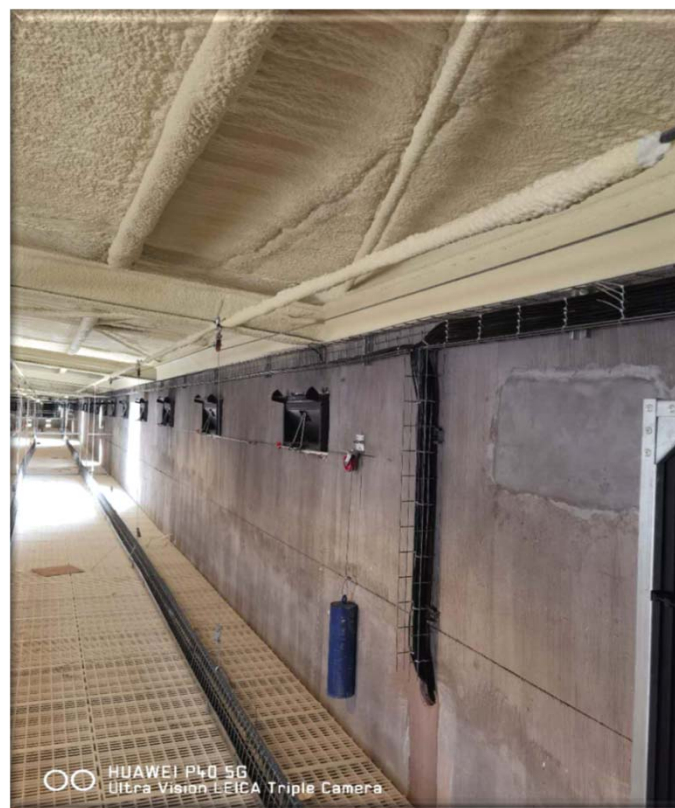
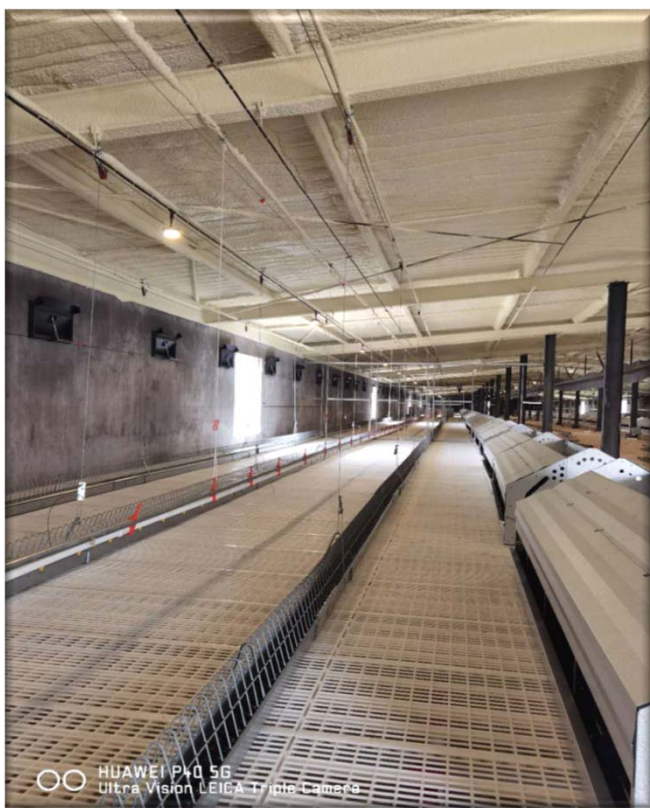
## Hebei Dachan parental generation broiler breeders





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## Xiantan Zhucheng parental generation broiler breeders





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**THANK YOU**

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