

Beibo

Product catalog 2026

Intelligent grain storage solutions

Monitoring, protection, temperature
control and connected operations for
large-scale grain storage.



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Five connected product systems

From grain condition to depot operations

Beibo's product portfolio connects condition monitoring, environmental control, protection and operational records across the storage site.



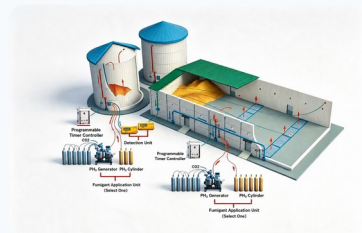
Grain Condition Monitoring

Temperature, humidity, moisture, pest and gas detection



Temperature Control

Aeration, ventilation components and grain cooling



Grain Protection

Recirculation fumigation and controlled atmosphere



Inbound & Outbound

Vehicle entry, weighing, sampling and records



Storage Platform

One interface for depot-level visibility and operations

One platform for the entire depot

Smart Storage Management Platform

A central view of storage locations, grain condition, equipment status and key depot operations.



Monitoring · protection · control · operations

● Storage visibility

Monitoring locations and grain-condition display in one management view.

● Equipment oversight

Ventilation and other connected storage equipment can be viewed centrally.

● Operational records

Supports inbound/outbound quantity monitoring, messages and personnel management.

A clear view of the grain depot

Smart Storage Management Platform

English-language views for depot overview, storage-condition data and individual silo status.



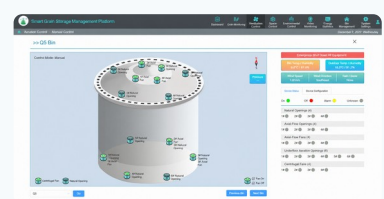
Depot overview

Storage locations and site-level operating status



Storage-condition dashboard

Grain, air and operational information in one view



Silo condition view

A visual reference for individual storage structures

Platform views are configured around the storage site and connected systems.

The software interface shown here is a presentation view; features are configured per project.

Environmental monitoring

Know storage conditions at every point

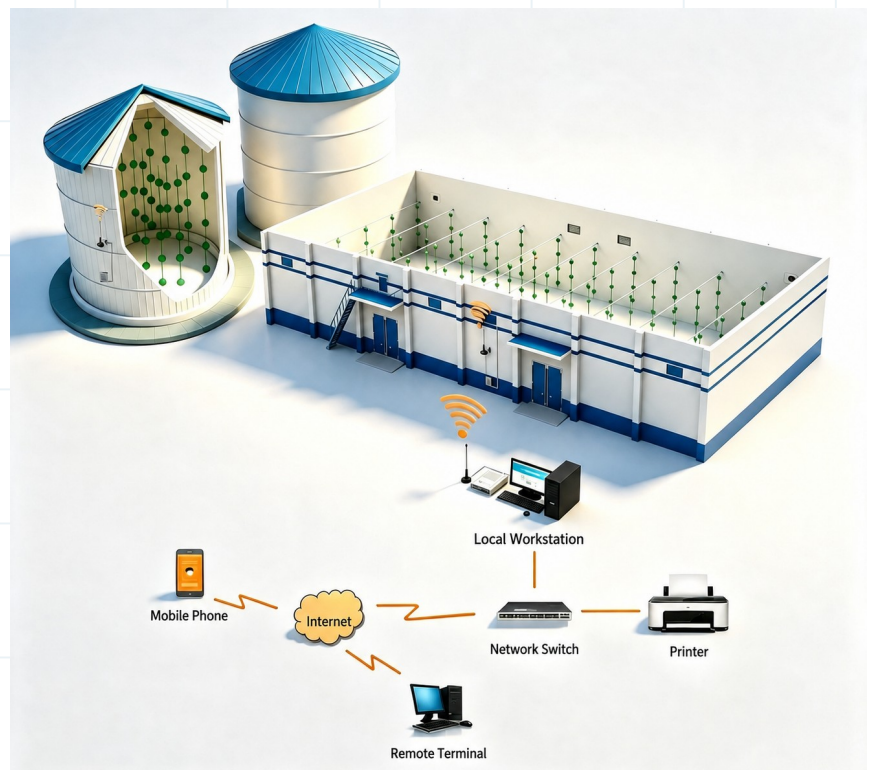
A configured system for grain temperature, air temperature and humidity across flat warehouses, shallow circular silos and vertical silos.

- **Flexible communications**

Wired RS-485, Ethernet or wireless communications can be configured.

- **Central and remote access**

Supports central control rooms, local workstations and remote terminals.



-40 to 60 °C

Air-temperature
measurement range

10–99% RH

Air-humidity measurement
range

**±0.5 °C
±3% RH**

Temperature / humidity accuracy

Hardware for real storage conditions

Monitoring components

Field hardware is selected for the grain-storage structure and operating environment.



Grain temperature & moisture monitoring cable



Wireless in-bin temperature monitor



Monitoring controller

Controller capacity

512

temperature sensors

6

humidity sensors

IP68

Portable collector and temperature cable protection rating

● Digital sensing

Digital temperature and humidity sensing can be configured around the storage layout.

● Site-fit controller

304 stainless steel enclosures and a Zone 21 dust-atmosphere option are available.

● Cable design

HDPE cable sheath, 300 kg tensile strength and a replaceable-core option for shallow circular silos.

Pest & gas detection

Detect conditions before a problem grows

Sampling-based configurations can combine pest, gas, temperature and humidity detection in a modular field system.



Mobile pest detection host



Pest trap



Sampling selector module

Typical gas-monitoring ranges

PH₃

0–2,000 ppm · ±3% F.S.

O₂

0–30% · ±1% Vol.

CO₂

0–50,000 ppm · ±5% F.S.

- **Modular deployment**

Detection units and field devices can be installed to suit the warehouse configuration.

- **Pest monitoring**

Trap, sampling and management configurations support early pest-detection work.

Inspect without entering the grain

Grain-surface inspection robot

A mobile in-bin device for grain-surface temperature measurement, gas detection, grain sampling and video monitoring.



Grain-surface inspection robot



Four tasks in one field device

- Grain-surface temperature
- Gas detection
- Grain sampling
- Video monitoring

In-bin inspection

A mobile tool for sample, condition and visual inspection work

Aeration control

Automate the air path

System configurations coordinate field controls, weather sensing, motorised openings and fan equipment around the storage structure.



Electric rain cap



Motorized ventilation window



Motorized air damper



Roof-mounted explosion-proof remote unit

- **Rain-ready openings**

Electric rain caps close automatically in rain or snow and open during aeration operation.

- **Fan configurations**

Dual-stage fans are suited for roof-mounted negative-pressure aeration in shallow circular and vertical silos.

- **Connected equipment**

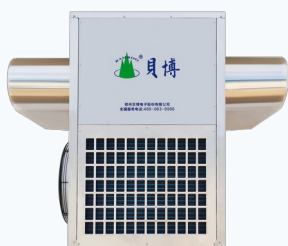
Configurations may coordinate ventilation windows, axial fans, mixed-flow fans and control stations.

Products shown: rain cap · ventilation window · air damper · roof remote unit

Field hardware for temperature control

Integrated temperature control

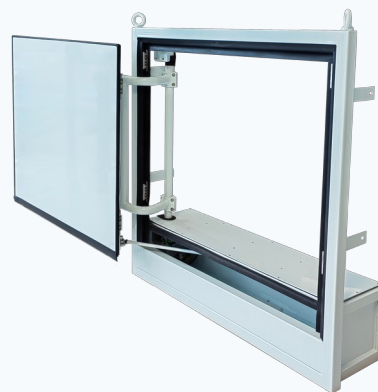
Equipment can be configured together to coordinate cooling units, ventilation components and local control at the storage structure.



Grain cooling unit



Integrated control cabinet



Motorized outward-swing window

Cooling

Dedicated grain cooling units for storage applications

Ventilation

Motorized field components to manage the air path

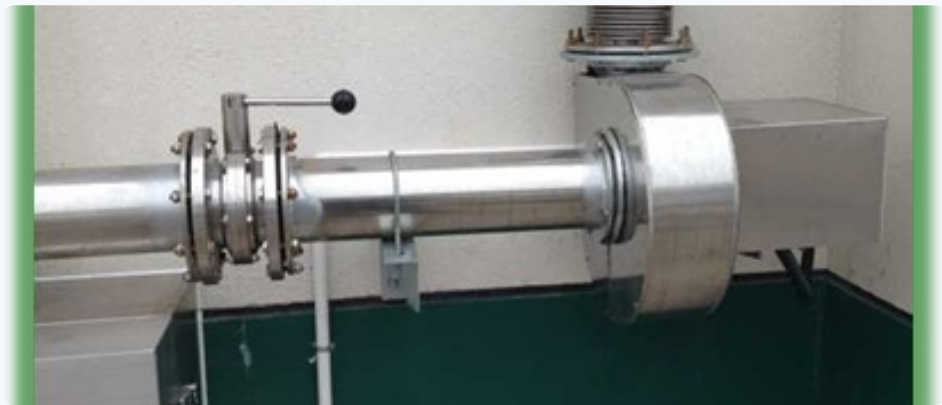
Control

A central equipment layer for configured storage systems

Recirculating air temperature conditioning

Create a controlled internal air loop

A closed-loop system uses existing bottom aeration ducts, a recirculation fan and insulated piping to circulate air inside the storage structure.



Duct intake

Draws air from the bottom aeration ducts

Insulated pipe

Returns the air to the upper storage space

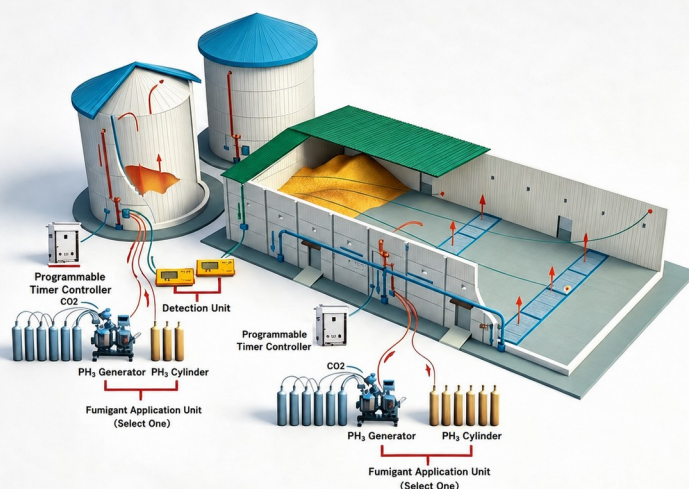
Closed loop

Avoids exchange with outside air during the circulation loop

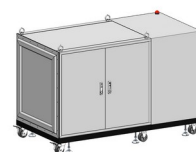
Recirculation fumigation

Distribute fumigant through the storage system

System configurations use a recirculating flow path to move fumigant through grain-storage structures.



Fumigant generator



Phosphine degradation unit

- **Core equipment**

Configurations include a programmable timer controller, detection unit and fumigant application unit.

- **Storage-fit layout**

Applicable configurations are available for flat warehouses and silos.

- **Fumigant application**

Application equipment is configured for the storage structure and operating plan.

Nitrogen controlled-atmosphere storage

Manage the storage atmosphere

Nitrogen controlled-atmosphere systems form part of Beibo's grain-protection portfolio for storage environments that require atmosphere management.



Controlled-atmosphere control cabinet



Mobile nitrogen-generation unit

- **System equipment**

Configurations include controlled-atmosphere control cabinets and mobile nitrogen-generation units.

- **Integrated deployment**

Can be specified alongside monitoring, gas detection and other storage systems.

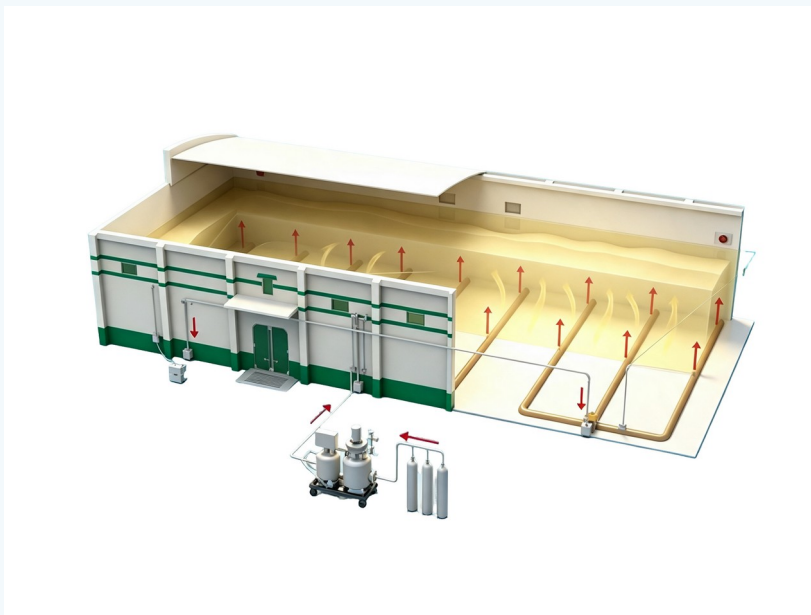
- **Project-led engineering**

Equipment selection and installation are configured for the site's storage structure and operating needs.

Grain cooling

Actively cool the stored grain environment

Dedicated grain-cooling units are used where ambient conditions cannot provide the cooling needed for the storage plan.



Grain cooling unit



Configured system equipment

Dedicated units

Grain-storage cooling equipment designed for deployment at the storage site

Configured systems

Unit and ducting arrangement selected around the storage application

Site-fit delivery

Equipment selection and arrangement are configured around the storage structure and operating plan

Make every load visible

Inbound & outbound management

A configurable operations system for vehicle entry, weighing, grain sampling and related records at the grain depot.



Vehicle entry & weighing



Vehicle entry management

Operations workflow

Vehicle weighing

Grain sample inspection

Related records

- **Configurable operations**

Supports the operational workflow around truck entry, weighing, sampling and related records.

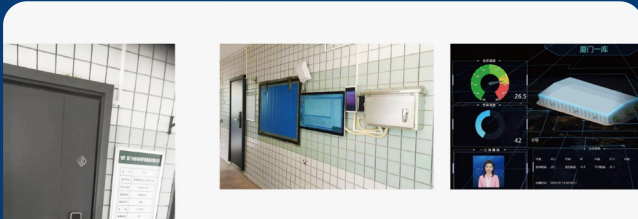
- **Depot-level visibility**

Connects physical entry and inspection work to the wider grain-storage operation.

Smart access control

Make warehouse entry safer and traceable

A warehouse entry system designed to combine identity verification, gas-awareness and operational records around grain-storage access points.



Access verification and entry monitoring

Access functions

- Face, fingerprint and password authentication
- Oxygen and phosphine gas concentration monitoring with alerts
- Entry / exit headcount statistics
- Linked warehouse lighting and access records

Configured for grain-storage access procedures

Designed to support access controls and visibility around warehouse entry operations.

Integrated control equipment

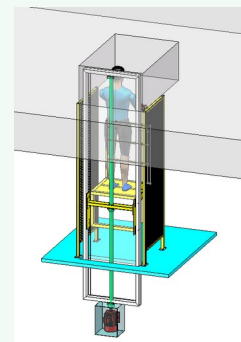
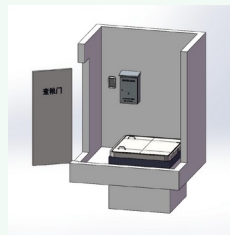
Bring subsystems into one control layer

Control cabinets and auxiliary equipment connect monitoring, detection and storage-control systems into a coordinated installation.



Integrated control cabinet

Integrates grain-condition detection, storage-equipment control and centralized management.



Auxiliary equipment

Electric manholes and lifting platforms support safe access and inspection work in shallow circular silos.

System integration

Monitoring · gas · pest · aeration · temperature conditioning · controlled atmosphere

A portfolio built around grain storage

Systems, equipment and engineering

Beibo develops grain-storage systems for monitoring, protection, control and operational management.

01 Multi-Parameter Grain Condition Monitoring

02 Integrated Temperature Control

03 Grain Protection Systems

04 Inbound & Outbound Management

05 Smart Storage Management Platform

System design and equipment selection are configured around each storage site.

Trusted across China's grain storage network

Scale, coverage and customer variety

Beibo's partial customer directory represents customers across 15 provinces, spanning national, provincial and local grain-storage organizations.

7,000+

installations

Nationwide application record

15

provinces represented

In Beibo's partial customer directory

Customer representation

- **National grain reserves**

Central Grain Reserves Corporation
depot companies

- **Provincial grain reserves**

Provincial storage and reserve operators

- **Local grain reserves**

Municipal and county grain-reserve
organizations

- **Commercial grain storage**

Grain, grain-and-oil, and storage-
management companies

Customer directory shown as an indicative, partial list; individual customer names are available separately.

Credentials that support delivery

Selected company and product qualifications

A selection from Beibo's qualification archive, covering management systems, enterprise credentials and product compliance.



Quality management system



Environmental management system



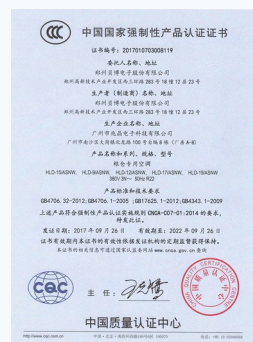
Occupational health and safety system



High-tech enterprise certification



Software enterprise certification



Product certification record

Representative records from the supplied company and product qualification archive.

Intellectual property across hardware and software

Representative patent and software-rights records

Beibo's qualification archive includes records covering monitoring, sampling, fumigation, ventilation and storage-management software.



Multi-point sampling selector

Invention patent



Wireless sensor technology

Invention patent



Phosphine tail-gas photodegradation device

Invention patent



Integrated multi-parameter detection rod

Invention patent



Motorized outward-swing insulated window

Utility model



Smart storage management software

Software copyright

Selected records from Beibo's invention-patent, utility-model and software-copyright archive.

A long-term partner for grain storage

Engineering expertise since 1997

Zhengzhou Beibo Electronics develops grain-storage systems, equipment and project configurations for complex storage sites.



Since

1997

Grain-storage expertise

Incorporated in 2003

NEEQ stock code: 834792

Project-based configuration

Systems and equipment selected around the storage structure and operating needs

For quotations, system planning and catalogue enquiries, contact Beibo's overseas business development team.



Beibo

Intelligent grain storage solutions

Let's plan your grain storage system.



Start with a WhatsApp conversation.

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Zhengzhou Beibo Electronics Co., Ltd.

Grain monitoring · Pest control ·
Aeration · Temperature
conditioning · Grain cooling ·
Platform management

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