



**YZDITEC**

# **Black Warrior System**

**C1 Servo Hoist and Stage  
Automation Control System**



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Precisely Right.

# C1 Servo Hoist

## CERTIFICATE of Conformity

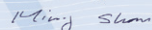
**Registration No.:** AK 50663205 0001  
**Report No.:** CN255IBT 001  
**Holder:** Guangzhou Yuezhong Digital Technology Co., Ltd.  
No. 17, Haibei Wenchang Road, Hailong Street, Liwan District, Guangzhou, 510000 Guangdong P.R. China  
**Product:** Chain Hoist  
(Electric Chain Hoist)

**Type designation listed on the next page**

The certificate of conformity refers to the above-mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned on the next page. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

**Date:** 2025-01-21

**Certification Body**

  
Ming Shan



TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

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Page 1 of 2

## CERTIFICATE of Conformity

**Registration No.:** AK 50663205 0001  
**Product:** Chain Hoist  
(Electric Chain Hoist)  
**Tested according to:** EN ISO 12100:2010  
EN 14492-2:2019  
EN 60204-32:2008  
SQP2:2018  
**Identification:** Type Designation  
BW01A-0.5T  
Serial No.: 24121001  
Application Type: C1

**Remarks:** 1. Refer to test report CN255IBT 001 for details.  
2. The machinery is considered incomplete and must not be put into service until final installation.  
It has to be checked in compliance with SQP2 2018.



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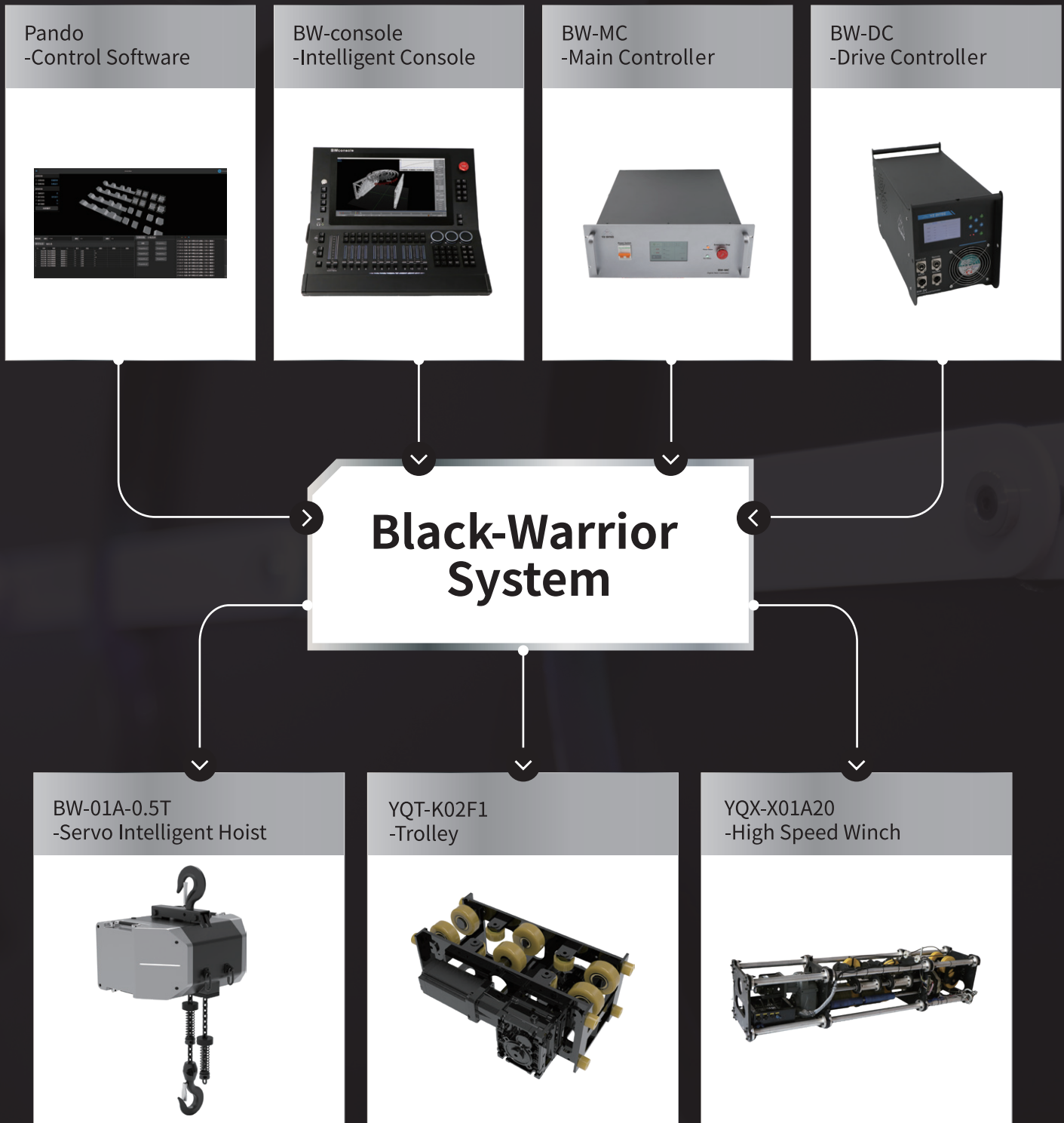
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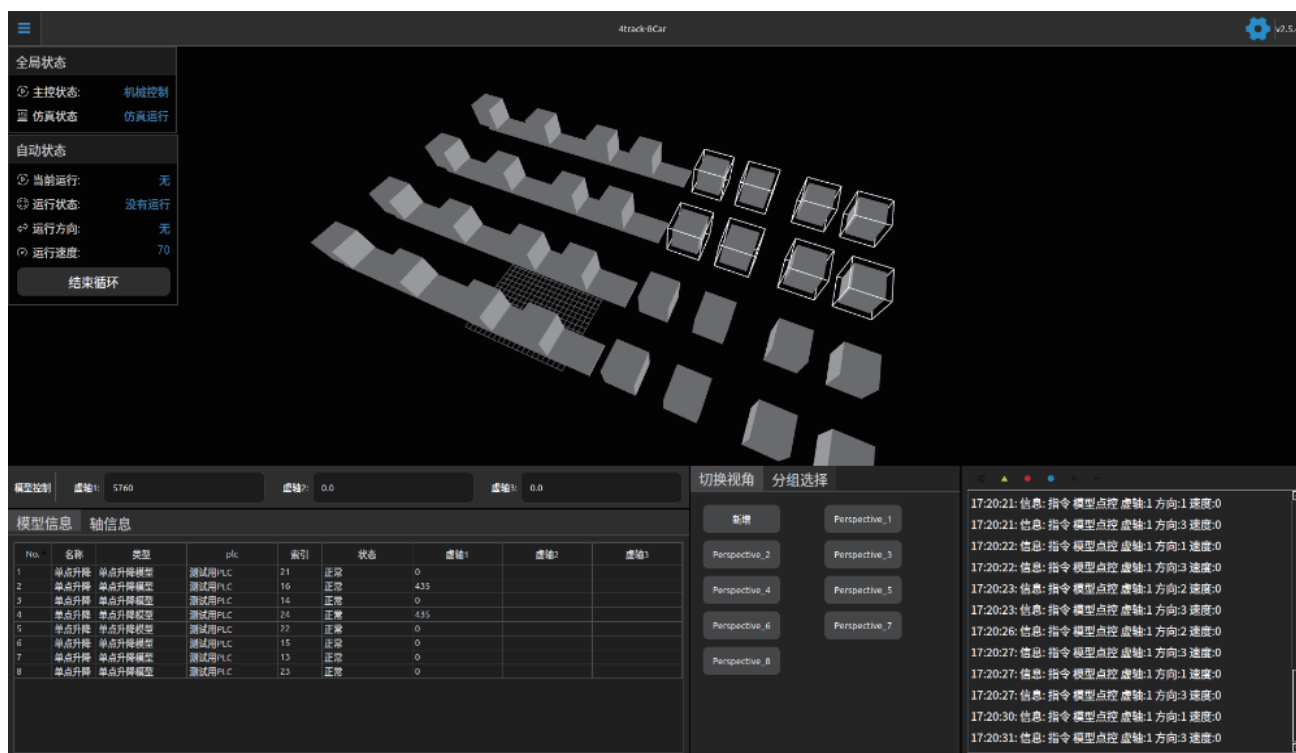
Page 2 of 2

Black Warrior System, developed by Yuezhong Digital Technology, provides a comprehensive solution for Servo Intelligent hoists and rental stage machinery control.

As a digital control system, the Black-Warrior System integrates functions such as control, early warning, and safety. It ensures smooth operation with millimeter-level precision, even during complex geometric movements.







## Pando Control Software

- The Pando Control Software serves as the human-machine interface for the BW System, delivering an excellent user experience.
- It supports operation via both the BW-console Intelligent Console and Windows computers.

Offline Simulation, 3D Preview, What You See Is What You Get

Preset Motion Programs, Easy and Convenient Editing

Real-Time Monitoring, Fault Alerts

Smart Algorithms Ensure Safe Motion Range





## BW-console Intelligent Console

- Serving as the central operation platform of the Black-warrior System, it is stable, reliable, and user-friendly.
- Built on a stable version of the Linux operating system, it integrates the Pando Control Software, providing the most compatible operating platform for the Black-warrior System.

+

Emergency stop supports both Category 0 and Category 1 stopping.

+

Equipped with a high-resolution touchscreen for assisted operation.

+

Equipped with a DMX-IN port, enabling mechanical actions to be triggered via the DMX 512 protocol.

+

Supports fiber optic communication with the BW-MC™ Main Controller, allowing communication distances of over 500m.



## BW-MC Main Controller

- Central Control Unit of the Black-warrior System.
- Delivers high precision and seamless performance, enhancing stage design with greater brilliance.

+

Built-in algorithm models such as multi-point synchronization, multi-point oscillation, and single-track multi-car ensure smooth and fluid motion, further reinforced by the dual protection of Pando Control Software.

+

Equipped with a built-in safety control module, working in conjunction with the software and sub-control units to provide triple-layered operational safety assurance.

+

Supports 128-loop network grouping, offering redundant connections and reliable transmission.

+

Utilizes EtherCAT high-speed industrial bus for data transmission, achieving a 2ms response cycle for fast and accurate performance.



## BW-DC Drive Controller

- Black Warrior System's Control Unit --Execution Units of the Main Controller.
- BW-DC™--The Sub-control Cabinet with versatility, capable of driving servo motors of different power ratings (including digital servo hoists, trolley, and high-speed winch).

+

Built-in safety module: overload protection, dual brake control, limit detection, and more. Works in conjunction with the software and main controller to provide triple-layered operational safety assurance.

+

Built-in safety module: overload protection, dual brake control, limit detection, etc. Together with the software and main controller, it provides triple-layered operational safety assurance.

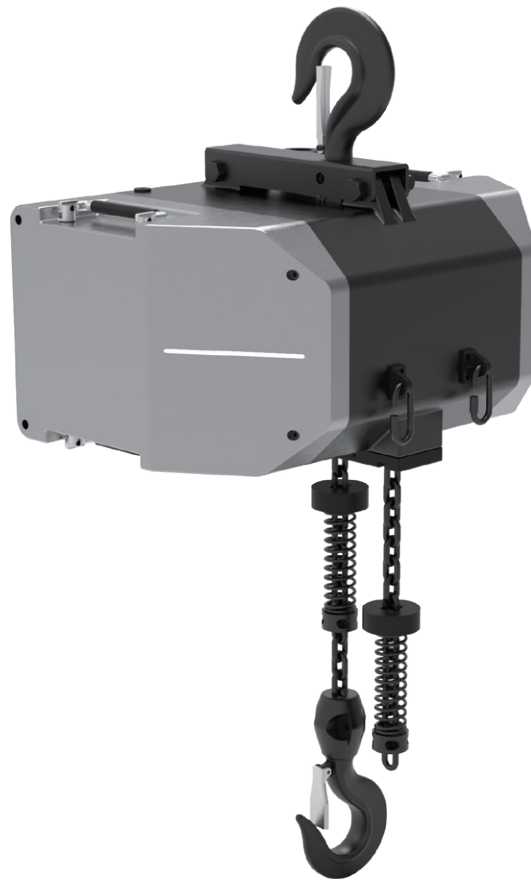
+

Supports panel configuration of motor parameters.

+

Supports real-time display of motor status information on the operation panel.





## BW-01A-0.5T Servo Intelligent Hoist

- The execution units of the Black Warrior System, working with precision, stability, and reliability.
- Ensures smooth operation of complex movements while maintaining the highest safety standards.

+

Has been certified by the German entertainment industry safety standard BGV-C1.

+

Complies with the European entertainment industry standard EN 17206.

+

Uses absolute value servo motors, ensuring precision, stability, and reliability even after extended operation.

+

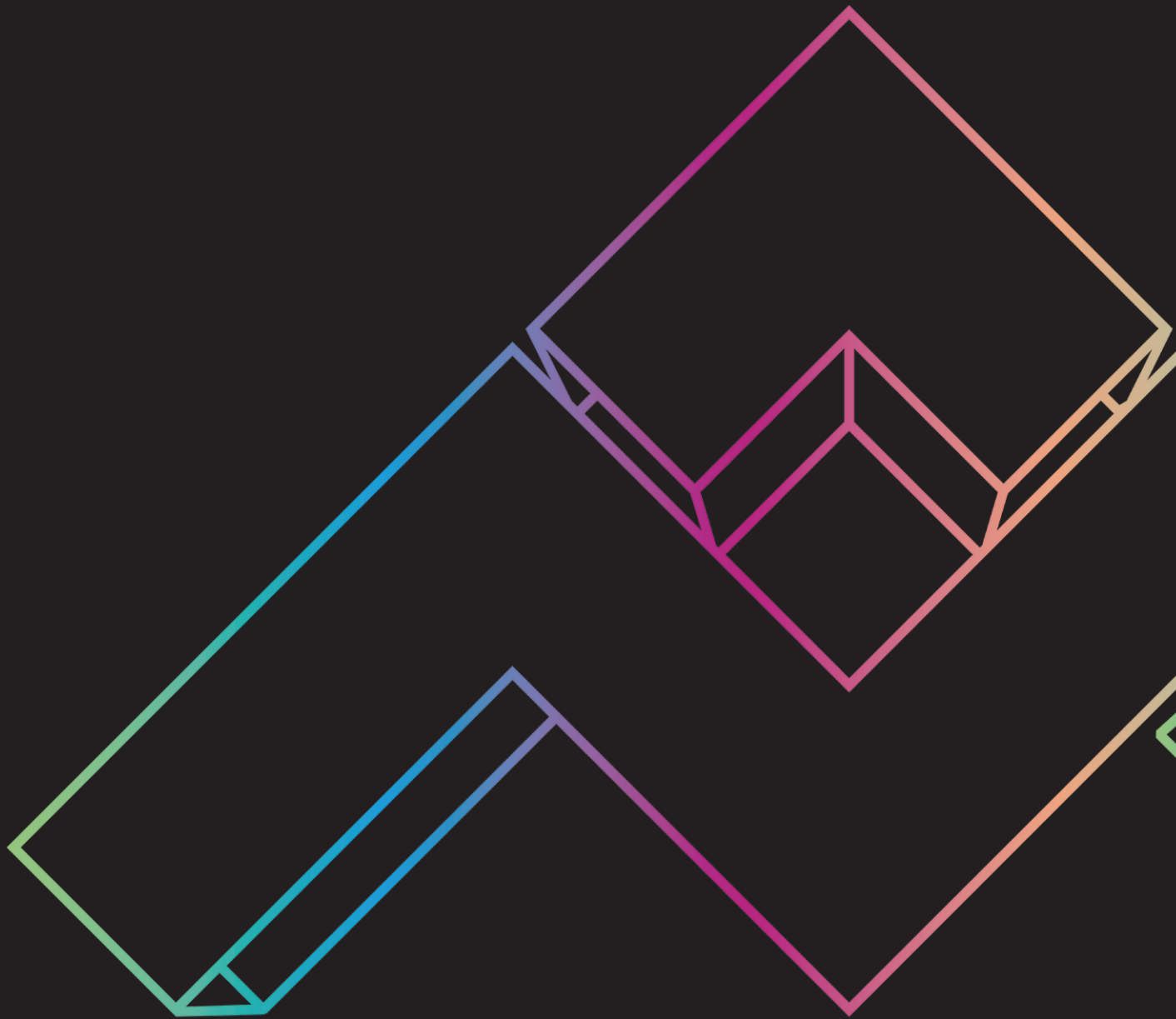
At a 500kg load, the speed is 25m/min; at a 300kg load, the speed is 42m/min.

+

The overall safety factor is greater than 8.

+

Protection rating: IP65.



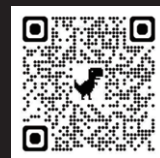
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