
TECHNICAL SPECIFICATION SHEETS

Zigong Lantern & Animatronic Dinosaur Manufacturing Standards

HuilonHall Culture & Arts Co., Ltd.

Based on Sichuan Provincial Local Standards DB51/T Series | 2022-2026

www.festivelanterns.com | Zigong, Sichuan, China

Our Standards Framework

7 Local Standards + 1 Industry Standard System | 238 Standards Across 5 Domains

DB5103/T30-2022

Lightning Protection
Outdoor lantern lightning safety systems

DB51/T 2875-2022

Art Lighting Specs
Craft lantern classification & fabrication

DB51/T 2876-2022

Production & Exhibition
Behavioral requirements & traceability

DB51/T 2877-2022

Animatronic Dinosaur
Core product technical specification

DB51/T 2937-2022

Exhibition Service
End-to-end service requirements

DB51/T 2938-2022

Installation Layout
Site setup & design principles

DB51/T 2939-2022

General Fabrication
16-step manufacturing workflow

2026 Industry System

Standard System
238 standards, 5 subsystems

All standards issued by Sichuan Administration for Market Regulation. HuilonHall participated as co-drafting organization.

Animatronic Dinosaur — Technical Specifications

DB51/T 2877-2022 General Technical Specification

Size Classification (8 Categories)

Category	Saurischia (m)	Ornithischia (m)
Micro	<1m	<1m
Small	1-2.9m	1-2.9m
Medium-Small	3-5.9m	3-4.9m
Medium	6-8.9m	5-6.9m
Medium-Large	9-11.9m	7-8.9m
Large	12-14.9m	9-10.9m
Extra-Large	15-17.9m	11-12.9m
Ultra-Large	≥18m	≥13m

Technical Parameters

Frame: Q235 carbon steel + galvanized wire

Skin: High-density sponge + elastic fiber

Movements: 3-8 (head, mouth, tail, eyes)

Sound: Dinosaur vocalizations, adjustable

Sensors: Infrared motion detection

Power: 110V/220V, 200W-800W/unit

Temperature: -40°C to +40°C

Certifications: CE, FCC, RoHS

Lantern Fabrication — 16-Step Process

DB51/T 2939-2022 General Fabrication Specifications

DESIGN	ART PREP	METALWORK	ELECTRICAL	DECORATION	INSTALLATION
<ol style="list-style-type: none">1. Concept design2. Construction drawings	<ol style="list-style-type: none">3. Blueprint prep4. Full-scale layout	<ol style="list-style-type: none">5. Wire cutting6. Wire shaping7. Steel structure8. Anti-corrosion	<ol style="list-style-type: none">9. Mech. transmission10. Internal lighting11. Component mount12. Safety protection	<ol style="list-style-type: none">13. Color pasting14. Art painting	<ol style="list-style-type: none">15. Final assembly16. Commissioning

Quality: No cold solder (pull $\geq 50\%$) | Fidelity $\geq 90\%$ | Grounding $< 4\Omega$ | 2hr trial run | Level 6 wind resistance

Craft Lantern — Size & Material Standards

DB51/T 2875-2022 Art Lighting Specifications

SMALL (S)

- Height: <45cm
- Wire: #10-14
- Connection: Touch-weld
- Cable: 0.5mm²

MEDIUM (M)

- Height: 45-150cm
- Frame: 25-40mm angle steel
- Support: 6-12mm round steel
- Cable: 0.5-2.5mm²

LARGE (L)

- Height: 150-220cm
- Frame: 25-40mm angle steel
- Support: 6-12mm round steel
- Cable: 0.5-2.5mm²

Surface Materials

- Base fabric: Eight-satin, polyester, color cloth (GB/T 18885)
- Decoration: Art lace borders, gold/silver leaf accents
- Painting: Acrylic Chinese painting, calligraphy, paper cutting
- Adhesive: Eco-friendly, GB 18583 compliant

Quality Requirements

- Electrical insulation >0.5M Ω
- Welding per GB/T 19867.1, no cold solder
- Surface: flat, secure, wrinkle-free main surface
- Glue edge exposure <0.5cm
- Assembly tolerance $\leq \pm 1$ cm

Lightning Protection & Electrical Safety

DB5103/T30-2022 + Multi-Standard Safety Requirements

Lightning Protection Thresholds

- Lanterns >10m height: MANDATORY lightning protection
- Lanterns 3-10m with >100m² footprint: tallest unit must be protected
- Lanterns <3m: no protection needed, equipotential bonding required

Technical Parameters

- Multiple protection for >400m² footprint (spacing $\leq 2 \times R_x$)
- Grounding resistance: $\leq 10\Omega$
- Materials: galvanized steel, copper ($\geq 50\text{mm}^2$), aluminum alloy
- Connections: welding preferred, soldering acceptable
- Warning signs required for all protected installations

Safety Standards

- Leakage protection: mandatory for all products
- Protective grounding resistance: $< 4\Omega$
- Power cables: 1-2.5mm² copper wire
- Internal lighting: LED or energy-saving lamps
- Electrical installation per GB 50254
- Ventilation/cooling for all electrical components
- Insulation resistance: $> 0.5\text{M}\Omega$

International Certifications

CE

FCC

RoHS

Exhibition Service Standards

DB51/T 2937-2022 + DB51/T 2938-2022 Installation Layout



Installation Design Principles

1. Overall coordination with venue
2. Layout rationality & visitor flow
3. Scientific & artistic approach
4. Creativity & uniqueness

Site Requirements

- Fire-retardant materials (GB 20286)
- Trilingual signage (CN/EN/JP/KR)
- Safety barriers for moving parts
- Emergency exits & fire lanes

≥90% Design Fidelity = Excellent | ≥85% = Good | ≥80% = Passing | Full trial run before handover

6. Audience participation

- Professional hoisting for large lanterns

Quality Assurance & Compliance

Full Lifecycle Quality Control System

1. Process Inspection

Each fabrication stage checked and recorded. Welding quality, dimensional accuracy, material compliance verified against construction drawings.

2. Finished Product Inspection

100% check for individual items, sampling for batches. Appearance + performance testing. Photo documentation required.

3. Delivery Acceptance

Joint sign-off with client. Full trial run verification. Documentation package including photos, test reports, and maintenance manual.

Key National Standards

GB 50017 (Steel Design) | GB 50205 (Steel Quality) | GB 50661 (Welding)

GB/T 5226.1 (Electrical Safety) | GB 8408 (Amusement Safety)

GB/T 17591 (Fire-Retardant) | GB 20286 (Public Fire Safety)

International & Traceability

- CE, FCC, RoHS certifications
- 2-year warranty standard
- Production records: 3+ years retained
- Safety logs maintained during exhibition
- Photo/video documentation at delivery

LET'S BUILD SOMETHING EXTRAORDINARY

Contact us for custom specifications and detailed quotations

HuilonHall Culture & Arts Co., Ltd.

www.festivalanterns.com

[Instagram@Dinohome1327](https://www.instagram.com/Dinohome1327) Dinohome1327@gmail.com

Zigong, Sichuan, China

All products are custom-manufactured per order. Compliance with local regulations at destination.