Technical Innovation Evidence - Patent Information

ZS Robotics H125 Four-Way Shuttle

1. Patent Related to 20-Wheel Load Distribution Architecture

Patent Title

Multi-Wheel Group Four-Way Shuttle with Steering and Lifting Coordination

Patent Information

Patent No.: CN121894326A
Patent Type: Invention Patent
Application Date: 2026-04-21

Technical Relevance

This patent relates to the multi-wheel group structure and coordinated steering and lifting mechanism of the four-way shuttle.

The patented design optimizes the wheel group arrangement and load-bearing structure, improving load distribution, reducing concentrated loads and enhancing operational stability during high-load pallet handling.

Related Product Feature

H125 20-Wheel Load Distribution Architecture

- 20-wheel configuration
- Optimized wheel group arrangement
- Improved load distribution
- Enhanced running stability

2. Patent Related to Servo Torque Feedback Based Pallet Weighing Technology

Patent Title

Real-Time Pallet Weighing Method and System for Four-Way Shuttle Based on Servo Torque Feedback

Patent Information

Patent No.: CN122282075A
Patent Type: Invention Patent
Application Date: 2026-06-26

Technical Relevance

This patent relates to a real-time pallet weighing method based on servo torque feedback during the lifting process of the four-way shuttle.

The technology enables pallet weight detection without additional weighing equipment, simplifying system integration while providing intelligent weight data for warehouse operations.

Related Product Feature

H125 Integrated Pallet Weighing Function

- Weight detection during lifting process
- No additional weighing hardware required
- Intelligent pallet weight monitoring
- Improved warehouse operation visibility

Innovation Protection Summary

Innovation	Patent Support
20-Wheel Load Distribution Architecture	CN121894326A
Servo Torque Feedback Based Pallet Weighing	CN122282075A

This document is provided as supplementary technical evidence for the IFOY Award 2027 application of the ZS Robotics H125 Four-Way Shuttle.