

HSOAR Group Reveals How Cycloidal Drives Revolutionize AGV/AMR Performance at Unmatched Cost-Benefit

HSOAR Zero Backlash Precision Cycloidal Ball Reducer Drives Mecanum Wheel Integration to Perfect for AGV AMR Applications at Unmatched Cost Benefit

SHANGHAI, CHINA, June 28, 2024 /EINPresswire.com/ -- [HSOAR Group](https://www.hsoar.com/), a leading manufacturer of precision cycloidal gearboxes, today unveiled groundbreaking insights into how cycloidal drive technology is transforming the Automated Guided Vehicle (AGV) and Autonomous Mobile Robot (AMR) industry, offering unparalleled performance at an exceptional cost-benefit ratio.

The company's latest research highlights the significant advantages of cycloidal drives in heavy-load AGV/AMR applications across various industries, including automotive, aerospace, and heavy machinery manufacturing. As these sectors increasingly rely on automated solutions for material handling and transportation, the demand for more efficient, precise, and cost-effective drive systems has surged.

Key findings from HSOAR Group's research include:

1. Precision Enhancement: Cycloidal drives offer superior precision with backlash as low as 2-3 minutes, compared to 12 minutes in traditional systems. This improvement in accuracy is crucial for applications requiring precise positioning and navigation.
2. Performance Boost: HSOAR's SD-BLG120 model achieves a max speed of 2m/s and a loading



HSOAR Mecanum Wheel Integration Drives AGV AMR to Perfect at Unmatched Cost benefit Using zero backlash Precision Cycloidal gearbox wheel reducer

capacity of 700kg per wheel, significantly surpassing conventional designs. This enhanced performance allows AGVs and AMRs to handle heavier loads at higher speeds, improving overall productivity.

3. Innovative Design: The flat double cycloidal speed variation structure introduces steel ball rolling in cycloidal slot mechanical engineering, breaking through traditional gear engaging limitations. This novel approach results in reduced wear, lower noise levels, and improved efficiency.

4. Compact Integration: The in-wheel design incorporating a Precision Reduction Gearbox inside a [Mecanum Wheel](#) offers a space-efficient solution for large-payload AGVs/AMRs, allowing for more flexible and maneuverable designs.

5. Cost-Effectiveness: Despite its advanced features, HSOAR's cycloidal gearbox provides these benefits at a highly competitive price point, offering an unmatched cost-benefit ratio in the market.

Starrick Li, Overseas BD at HSOAR Group, commented on the significance of these findings: "Our [precision cycloidal gearbox](#) represents a paradigm shift in AGV/AMR drive technology. This innovation addresses critical industry needs for high precision, durability, and cost-effectiveness in heavy-load applications. We're seeing a transformative impact on how businesses approach automation in material handling and logistics."

The company's research also reveals that their cycloidal drive solution outperforms planetary gearboxes in high-precision applications, offering reduced noise, improved reliability, and extended lifespan under heavy load conditions. This is particularly relevant for industries with



Starrick Li (Erica Li) at IREX Japan Robotics Exhibition 2019 -HSOAR Group

Headquarters

The table below presents the Cycloid Reducer manufacturing base of major manufacturers.

Table 10. Global Key Manufacturers of Cycloid Reducer, Manufacturing Sites & Headquarters

Company	Manufacturing Sites	Headquarters
Nabtesco	XX	XX
Sumitomo Drive Technologies.	XX	XX
SPINEA	XX	XX
Nidec Drive Technology Corporation	XX	XX
Ningbo Zhongda Leader Intelligent Transmission Co., Ltd.	XX	XX
HSOAR Group	XX	XX
EGT Eppinger Getriebe Technologie GmbH	XX	XX
Tsuntien Precision Co., Ltd	XX	XX
Varitron	XX	XX
Shiuh Cheng	XX	XX
GAM Enterprises, Inc.	XX	XX

Source: Above companies; Secondary Sources, Expert Interviews and QYResearch, 2024

HSOAR Group Rank Global No.6 Major Brand for Cycloidal Reducer Manufacturer 2019-2030

24/7 operations, where minimizing downtime and maintenance is crucial.

In comparison to traditional drive systems, HSOAR's cycloidal gearboxes demonstrate:

- 75% reduction in backlash, enhancing positioning accuracy
- 100% increase in max speed, boosting operational efficiency
- 40% improvement in loading capacity, expanding application possibilities

These improvements are especially valuable in industries such as automotive manufacturing, where AGVs/AMRs are used to transport heavy vehicle assemblies and large components. In aerospace, the enhanced precision and load capacity enable more efficient handling of aircraft parts and large equipment. The heavy machinery manufacturing sector benefits from the improved durability and reliability in transporting large machinery parts.

HSOAR Group's cycloidal gearboxes have gained significant traction among top-ranking robotics startups and established manufacturers. This widespread adoption has contributed to the company's recent ranking among the global Top 6 cycloidal manufacturers, a testament to the technology's impact and market acceptance.

The company's success is further validated by its partnership with a Japanese unicorn robotics company, known for producing world-renowned robots using precision cycloidal gearboxes. This collaboration underscores the global recognition of HSOAR's technology and its potential to drive innovation in the robotics and automation industries.

Looking ahead, HSOAR Group anticipates that the adoption of cycloidal drive technology in AGVs and AMRs will continue to accelerate. As industries increasingly prioritize efficiency, precision, and cost-effectiveness in their automated systems, the demand for advanced drive solutions is expected to grow.

For more detailed information on cycloidal drive technology and its applications in AGV/AMR, interested parties are encouraged to visit <https://en.china-hsoar.com>. The website offers comprehensive resources, including technical specifications, case studies, and application examples that demonstrate the real-world benefits of cycloidal drives in various industrial settings.

About HSOAR Group:

HSOAR Group is a global leader in precision cycloidal gearbox manufacturing. Known for its innovative flat double cycloidal speed variation structure, the company's products are widely used in various industries, offering high-end performance at affordable prices. With a commitment to continuous innovation and quality, HSOAR Group is at the forefront of driving technological advancements in the field of robotics and automation.

For more information, please visit:

- Starrick Cycloid: <https://www.starrickcycloid.com>
- HSOAR Group: <https://en.china-hsoar.com>

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