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# AGV Steering Drive Wheels: Polyurethane on Cast Iron Units

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## Description

The core of any high-performance Automated Guided Vehicle (AGV) is its locomotion system. As global supply chains demand faster throughput and higher density, the application and features of AGV steering drive wheel in warehousing and logistics have become a top priority for system integrators and facility managers.

At the heart of these drive units is a specific material choice that balances strength with floor protection: polyurethane on cast iron wheels.



### Core Features: Why Polyurethane on Cast Iron?

When designing an AGV for heavy-duty logistics, the choice of wheel material is non-negotiable. Polyurethane on cast iron wheels are the industry standard for several reasons:

**Extreme Load Capacity:** The cast iron core provides the rigid structural foundation needed to support several tons of weight without deforming.

**High Traction & Low Noise:** The polyurethane tread offers a high coefficient of friction, ensuring the AGV doesn't slip during rapid acceleration or emergency braking. It also dampens vibration, keeping warehouse noise levels below 65dB(A).

**Floor Preservation:** Unlike pure metal wheels, polyurethane is non-marking and elastic enough to protect expensive epoxy or treated concrete warehouse floors from cracks and scratches.

**Durability:** These wheels are highly resistant to grease, oils, and chemicals commonly

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found on industrial floors, ensuring a long service life with minimal maintenance.

### Application in Modern Warehousing & Logistics

The application and features of AGV steering drive wheel in warehousing and logistics are most evident in high-efficiency environments:

**Narrow Aisle Navigation:** In dark warehouses with high-density racking, AGVs must navigate aisles with only centimeters of clearance. The precision of the steering drive ensures no collisions occur.

**Heavy Pallet & Container Transport:** From automotive parts to 40-foot shipping containers, the combination of cast iron strength and polyurethane grip allows for the safe transport of "extra-heavy" loads across long distances.

**24/7 Continuous Operation:** In automated sorting centers, drive wheels must withstand constant heat buildup from friction. Polyurethane compounds are specifically engineered to dissipate heat, preventing "tread separation" during multi-shift operations.

### Conclusion

Investing in high-quality drive components is a strategic move to reduce long-term maintenance costs and prevent system-wide downtime. By utilizing polyurethane on cast iron wheels, logistics suppliers ensure their AGVs are rugged enough for heavy loads yet precise enough for the most complex automated layouts. Contact us!