Polyurethane Tread Keyed Drive Wheels

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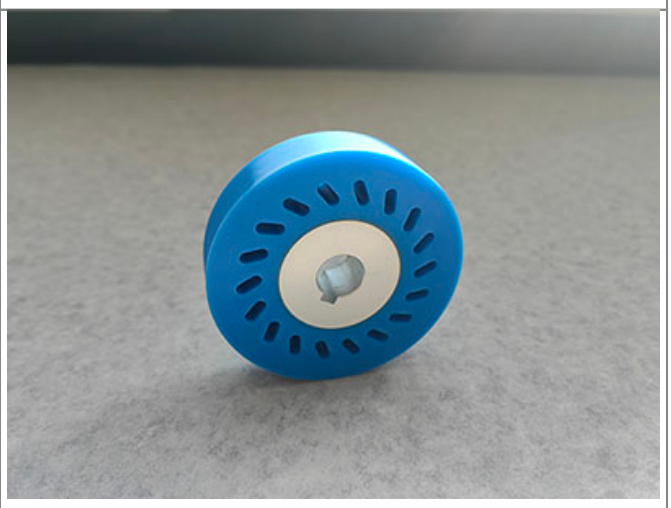
Thumb	
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Description

Polyurethane drive wheels with keyways are widely used in conveying, material handling, industrial drives, and automation equipment because they combine the mechanical strength of a keyed hub with the performance advantages of polyurethane treads.

What Makes Polyurethane Drive Wheels Valuable

Durability and wear resistance: Polyurethane typically outlasts rubber in abrasive and high-load conditions.

Shock and vibration dampening: Polyurethane reduces noise and impact while maintaining drive efficiency.

Traction and non-marking options: Formulations can provide high grip or non-marking properties to protect floors.

Customizable hardness: Wheel hardness (Shore A) typically ranges from about 60A to 95A to meet load and speed requirements (harder materials for heavy loads, softer materials for improved grip or shock absorption).

Bonding to metal: Polyurethane can be chemically bonded, cast-in-place, or mechanically locked to a metal core to ensure secure, long-lasting adhesion.

Key Selection Criteria

Load per wheel and safety factor: Choose appropriate wheel diameter, width, and hardness based on static and dynamic loads.

Shaft diameter and keyway specification: Match bore and keyway to shaft standards (ANSI/ISO/DIN) to ensure correct torque transmission.

Hardness and compound chemistry: Balance wear life and traction; consider oil, solvent, and temperature resistance.

Operating temperature: Standard polyurethanes typically work from about -30°C to +80°C; specialty formulations can handle higher temperatures—confirm with the supplier.

Speed and RPM limits: Consider centrifugal forces and heat buildup at high speeds.

Environment and contaminants: For exposure to oil, chemicals, or for food-contact applications, choose oil/chemical-resistant or food-grade polyurethane.

If you’d like, provide shaft diameter, load, speed, and working environment and I can suggest specific wheel types and hardness ranges, please contact us.