Polyurethane (PU) Drive Wheels

Title	Polyurethane (PU) Drive Wheels
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Description

Polyurethane (PU) Drive Wheels refers to the wheel that plays the following role and transmits power or motion in the mechanical transmission system: Unlike the driving wheel, the driven wheel does not provide power directly but realizes its own movement by contacting it and rotating it. In many mechanical equipment, the driven wheel is often used to carry and guide the task of transporting or conveying materials and loads, playing a key role in deceleration, load balancing, and adjusting the trajectory of movement.

Benefits of Polyurethane (PU) Drive Wheels

1. Strong wear resistance: Idler wheels with bearings can maintain good shape and performance in long-term high-intensity friction and rolling. In logistics warehousing forklift applications, the wear of polyurethane-driven wheels under frequent starting, stopping, and turning is much lower than that of traditional rubber wheels, reducing the need for frequent replacement and maintenance, reducing maintenance costs, shortening downtime, and thus improving production efficiency.

2. High load-bearing capacity: Polyurethane-driven wheels are important to load sharers of equipment, and together with the driving wheel, they support the weight of equipment and goods, reducing the pressure on the driving wheel. In heavy-duty logistics transportation, the driven wheel bears part of the weight, helping the driving wheel to easily provide power, reducing wear and fatigue, and improving the stability and durability of the transmission system.

3. Shock absorption and noise reduction: The elastic properties of polyurethane enable the driven wheel to effectively absorb vibration and impact, reduce noise, and provide smooth operation. This is particularly important in industries such as medicine and electronics, which not only creates a comfortable environment for patients and staff but also avoids noise interference with precision equipment.

4. Corrosion resistance and chemical resistance: Polyurethane has excellent corrosion resistance and chemical resistance and can resist erosion by chemicals such as oils, acids, alkalis, greases, and solvents, and adapt to harsh working environments. In chemical production, polyurethane-driven wheels can work stably in chemical

environments, ensuring the normal operation of equipment, and broadening its application range in complex industrial environments.

5. Low friction coefficient: The low friction characteristics of polyurethane make the driven wheel require less power during movement, which can improve the efficiency of equipment and reduce energy consumption.

Performance	Properties	Product parameters					
Hardness	PU hardness at 20℃	Shore	75A	80A	85A	90A	9
Tensile strength	Tensile strength	MPa	18	26	35	38	
Elongation at break	Elongation at break	%	600	580	550	530	5
Tear strength	Tear propagation resistance:	kN/m	50	60	73	105	1
	(without nick)						
Abrasion	Abrasion loss	mm³	45	40	30	30	
Density	Density	g/ cm³	1.14	1.14	1.15	1.16	1
Operating temperature	Working temperature	℃	-60~70℃				
Resilience	Resilience	%	50	55	50	48	
Compression set	Compression set	%	25	23	22	20	
	(deflection/22h/70℃□						
Poisson's ratio	Poisson's ratio	/	0.5	0.48	0.46	0.44	0
Modulus of elasticity	Modulus	MPa	5	20	40	60	
Coefficient of friction/steel	Friction coefficient/steel	/	0.8	0.75	0.6	0.5	0

Polyurethane (PU) Drive Wheels: Applicable Industries

1. Food and pharmaceutical industry: In the transmission system of food and pharmaceutical production lines, polyurethane-driven wheels help ensure that materials

run smoothly without contact with chemicals and pollution sources, and their low noise characteristics also help maintain a clean and quiet production environment.

2. Packaging industry: The transmission system in packaging equipment often needs to run stably for a long time. Polyurethane-driven wheels can not only ensure smooth transmission but also resist the erosion of packaging materials and chemicals in the environment, ensuring long-term and efficient operation of the equipment.

3. Electronics and semiconductor industry: In electronic manufacturing and semiconductor production lines, polyurethane-driven wheels are often used in precision handling and assembly equipment. Its excellent shock absorption and antistatic properties can prevent damage to precision electronic components.

4. Automobile manufacturing and assembly lines: Polyurethane-driven wheels are also widely used in automobile manufacturing and assembly lines, mainly used for driving and guiding transmission systems and assembly lines to ensure the precise handling and assembly of automobile parts.

With its unique performance advantages, polyurethane-driven wheels are widely used in logistics, heavy handling, electronic manufacturing, food production, and other industries. With the development of technology and changes in demand, polyurethane-driven wheels will play a key role in more fields and become an indispensable and important component in various mechanical equipment. By choosing high-quality polyurethane-driven wheels, you can effectively improve the working efficiency of equipment, extend its service life, and reduce maintenance costs, thus promoting the development. Contact us