Precision Wheels for Semiconductor Stocker Equipment

Title	Precision Wheels for Semiconductor Stocker Equipment
Thumb	
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Description

The stocker drive wheel for semiconductor cleanrooms is a critical component designed to ensure precise, stable, and contamination-free movement in automated storage systems. Engineered with polyurethane tread bonded to stainless steel cores, these wheels combine excellent mechanical strength with cleanroom compatibility, supporting smooth and reliable operation in demanding semiconductor environments.



Applications in stocker systems

Our drive wheels are widely applied in different types of stocker equipment used in semiconductor fabs, including:

Foup/pod stocker – for wafer carriers storage and transfer.

Reticle stocker – for secure handling of photomasks.

Ntb (near tool buffer) – providing fast and accurate wafer access near process tools.

TLP (tool load port station) – ensuring seamless wafer transfer between stocker and process equipment.

Tower stocker – enabling high-density vertical wafer storage in cleanrooms.

Key features and benefits

Polyurethane on stainless steel: Combines excellent wear resistance with structural strength, preventing particle generation and maintaining cleanroom standards.

Low noise & vibration: Ensures stable movement of stocker shuttles and elevators, minimizing disruption in precision semiconductor environments.

Non-marking & clean: Special polyurethane material avoids leaving traces on cleanroom floors and prevents contamination.

High load-bearing capacity: Stainless steel cores provide strong support for continuous operation under demanding loads.

Precision rolling: Designed for accurate positioning and smooth travel in automated semiconductor handling systems.

Why choose our cleanroom stocker wheels?

We specialize in custom-engineered polyurethane wheels tailored for semiconductor cleanroom requirements. With strict control over material formulation and precision machining, our stocker drive wheels guarantee:

Extended service life

Compliance with semiconductor cleanroom standards

Reliable performance for 24/7 automated operation

The positioning is precise, with an error range of 0.1 mm.

Philson is committed to providing the most cost-effective and high-precision cleanroom storage wheels. Please contact us for a quote and consultation.