Air Caster Principle

Aero-Casters® "float" heavy loads on air

Air casters or air bearings provide a clean, quiet and safe alternative to moving heavy loads. AeroGo Aero-Casters are designed to literally float loads from 500 lbs. to over 5000 tons (226 kg to 4535 metric tons) on a virtually frictionless film of air. Aero-Casters use pneumatic components such as air regulators and hose, resulting in reliable products that operate in a safe, clean, and ergonomic manner in most environments including cleanrooms.

Inflated Aero-Caster

How Aero-Casters Work. An air film is created by compressed air pumped into the circular air caster diaphragm and center plenum chamber. When the air pressure in the air caster exceeds the weight of the load, air slowly and evenly escapes between the flexible diaphragm and the surface to create a thin, nearly frictionless film of air .003 to .005 inches thick. The load is virtually floating over the floor surface.

Aero-Caster Benefits. Reduced friction and omnidirectional movement allow the operator to precisely place and align the load in a limited workspace. The low profile of the air caster load module requires less than 3-inch (76 mm) clearance. Air casters will not damage floors and expensive reinforcement is usually not necessary, even when moving 5,000 tons.

Certifications. Since 1967, AeroGo has been the premiere manufacturer of air caster products. All AeroGo Aero-Casters are ASME B30.1 compliant.

Advantages to Moving Heavy Loads with Air Caster Technology:

- Low profile
- Low friction
- Economical and reliable
- Omnidirectional multi-positioning
- Flexible for a variety of applications
- Precise positioning without floor damage compared to traditional material handling equipment methods
- Ergonomic – reduces lift hazards
- Utilizes existing shop air
- Aero-Casters meet ASME B30.1 specifications

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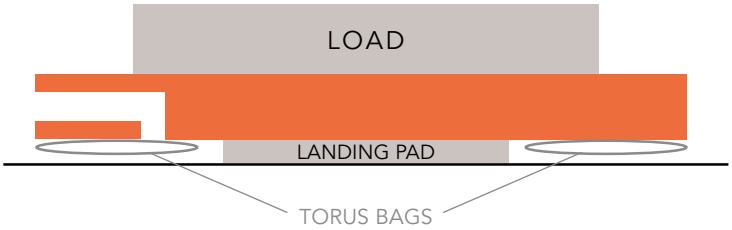
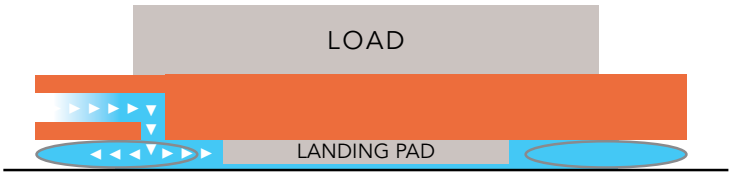
PRODUCT INFORMATION

The Aero-Caster Principle

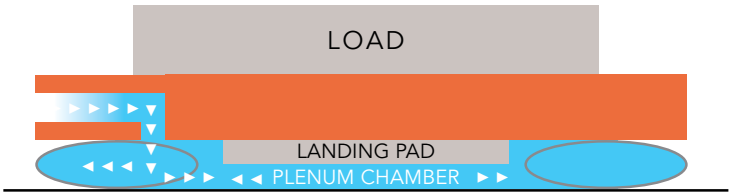
STEP 1
Prior to inflation, the load is solidly supported on landing pads. The pads protect the air caster torus bag from being crushed when the load is at rest.



STEP 2
When standard shop air is applied to the air caster, the torus bag inflates, creating a seal against the floor surface and the air bearing, raising the load.



STEP 3
When the pressure within the air caster unit is sufficient to offset the load's weight, air slowly and evenly escapes between the flexible torus bag and the floor. The load is literally floated on a thin, nearly frictionless cushion of air, .003 to .005 inches (.08 to .13mm) thick.



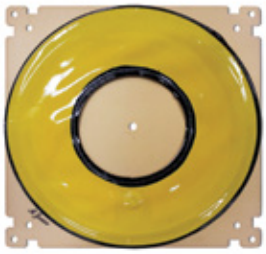
Aero-Caster Models

Neoprene

Used in over 80% of applications

The standard of the industry since 1967

Low pressure and low-load applications



Urethane

Superior abrasion resistance

For frequent or long moves or rough floors

Gapmaster

Allows loads to cross gaps, steps or move over slightly porous surfaces

DuraGlide

Provides lower lift than other materials

Perfect for high travel areas

For surfaces difficult to clear of dirt or debris

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QUALITY MANAGEMENT SYSTEM ISO 9001 CERTIFICATE FM588888

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