AeroGo Air Cushion Vehicle Systems

UP TO 800+ TONS OF MOVING MUSCLE FLOATING ON AIR

MOVE EXCEPTIONALLY HEAVY LOADS EASILY AND SAFELY
About AeroGo

AeroGo, Inc. is a proven world leader in the engineering, design, manufacturing and support of material transport systems.

AeroGo products comply with ISO 9001:2008 quality standards and are CE compliant. AeroGo Aero-Casters meet ASME B30.1 requirements.

AeroGo offers a full complement of support services throughout the world.
Heavy industries around the globe depend on AeroGo Air Cushion Vehicles

AeroGo Air Cushion Vehicles (AV) are proven to be an extremely cost effective and safe alternative to cranes, conveyors, wheeled vehicles, rollers, rails and drag chains. AeroGo AVs are equipped with industry leading Aero-Caster technology and specialized drive systems enabling multi-ton loads to be moved easily, precisely and safely by one operator.

**Energy**
Air Cushion Vehicles are perfectly suited to move oversized, awkward, unbalanced or heavy components such as tanks, storage casks, nacelles, pumps, motors and turbines.

**Aerospace**
Aerospace manufacturer’s rely on AeroGo AVs to assist in moving tooling, work stands, satellites, rockets, or entire aircraft. Our AVs can be easily configured to the specialized requirements of the Aerospace industry. Available options include cleanroom compatibility, explosion proof, specialized materials, and fault tolerant design.
Transformer
Air Cushion Vehicles transport power distribution transformers throughout the manufacturing process. Our AV units are commonly used for moving transformers in and out of test cells, in and out of high temperature vapor phase ovens, and moving transformer components.

Manufacturing Assembly
The omni-directional movement inherent to Air Cushion Vehicles eliminates first-in, first-out requirements, or fixed move paths in production line flow, making our AV technology a flexible solution in manufacturing environments. The ease of operation of our Air Cushion Vehicles allow personnel to quickly adapt and utilize the AV system.
Marine Air Cushion Vehicles maneuver heavy loads easily through tight spaces in shipyards. AVs can be multi-purpose to move multiple components throughout the shipbuilding or repairing process. AVs allow mobilization of components that were once considered immobile due to their heavy weight.

**BENEFITS**

**Easy to Implement**
- AVs operate on standard floors (machine troweled, sealed concrete)
- Flexible: minimal operational footprint maximizes usable floor space
- AVs simplify manufacturing processes
- AVs do not require complex installation (unlike expensive cranes or conveyors)

**Portable**
- Unlike cranes, AVs do not require permanent installation in the facility
- AVs can be relocated and utilized in any facility with compressed air
- AVs provide a compact size and footprint

**Inherently Safe**
- AVs provide low profile transport
- AVs eliminate the dangers associated with risky rigging operations
- AVs provide exceptional operator visibility
- AVs automatically adjust for uneven loading

**Minimizes Floor Loading**
- AVs allow for extremely heavy loads to be transported over standard floors without additional site work
- Minimizes damage to expensive epoxy coated floors

**Exceptionally Maneuverable**
- AVs provide omni-directional movement through six steering modes
- AVs provide rotation within its own footprint
- AVs provide soft start/soft stop – controlled accelerations and decelerations
- Precision steering

**Flexible**
- AVs do not require direct loading
- AVs can be used for multiple loads
Automatic Height Control System
The height control system automatically adjusts the pressure and lift height of the Aero-Casters to compensate for different load weights and center of gravity positions. Our ultrasonic, non-contact style sensors ensure the system is immune to debris on the floor and provides maximum reliability.

Steerable Power Drives
Steerable power drives provide traction and stability of direction.

Air Cushion Vehicles are equipped with two internal drives that include variable speed, bi-directional pneumatic motors designed for high torque at low speeds with finite control for load positioning. These drives have an automatic air suspension system which allows for a smooth and stable ride while under full load.

Radio Remote Control
AV functions are controlled by our lightweight, easy to use, radio remote control, including system power / emergency stop, drive speed, steering mode selection and steering direction. One operator controls the AV, whether operating single or tandem units. In tandem operation AVs synchronously turn and stop together.

Supporting Skid
Support skids allow our AV unit to be shared for multiple loads. Skid supports feature pads to protect the floor. Optimized skid design minimizes overall system cost.

Electrically Controlled Hose Reel
The integrated hose reel rewinds with the touch of a button on the radio remote control and extends as needed. The Auto-Stop and alarm features are standard.

Scalable
Two or more AVs can be linked together to operate in tandem mode as a way to expand overall system load capacity. For example, two 100 ton AVs can be operated independently or can be operated in tandem mode to provide 200 tons of total load capacity. When operating in tandem mode steering, speed control and other AV functions are controlled using a single hand-held radio remote control.
Whether you are moving 10 tons or 800+ tons, the AeroGo Air Cushion Vehicle can handle the load.

Air Cushion Vehicles can be operated individually or in tandem to provide load capacities from 10 tons to over 800 tons. While designed for skid supported loads, the AV can also be configured for direct loading.

**SAFETY FEATURES**

Many safety features are incorporated into the Air Cushion Vehicle design, including:

- Simple intuitive operation
- Multiple e-stop switches
- Independent safety relay in the e-stop circuit
- Audible and visual alarms during operation
- Radio remote allows 100% walk-around visibility
- Low profile operation eliminates dangerous overhead moves
- Minimal transport height eliminates dropped load concerns
- Advanced suspension drives ensure traction over variable surfaces
# AIR CUSHION VEHICLE SPECIFICATIONS

## Standard Specifications | Metric Specifications

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<th>Model Number</th>
<th>Maximum Capacity (lbs)</th>
<th>Standard Width (ft)</th>
<th>Standard Length (ft)</th>
<th>Standard Height (in)</th>
<th>Maximum Capacity (kg)</th>
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## Other Specifications

- **Working temperature**: 4°F to 149°F / -10°C to +65°C; high temp option is available
- **Driving Speed**: 0 ~ 33 feet/minute / 0 ~ 10m/minute

AeroGo Air Cushion Vehicles are equipped with:

- Heavy duty welded steel frame
- Slide-Mount Aero-Casters, ASME B30.1 compliant
- Fully steerable powered drives
- Radio Pendant control for movement and steering
- Internal hose reel with 131 foot/40 meter hose (excludes AV-A20T and AV-A45T models)
- State-of-the-art PLC system
- Industrial NEMA rated enclosures for electronic components
- Fully automatic system compensates for different load weights and centers of gravity
- On board battery and charging system
- Large, easy to read Advanced diagnostics through HMI (Touchscreen LCD panel) to monitor operational characteristics and prompts for scheduled maintenance

### Installation Support

- Manufacturing representative onsite at startup for operations and maintenance training
- Detailed operation and maintenance manuals
- AV maintenance toolkit

Additional sizes and capacities available. Contact factory for details.
**WHY CHOOSE AEROGO’S AIR CUSHION VEHICLE?**

### Cost

Comparative cost was derived by comparing the approximate purchase price of a drag chain, air cushion vehicle, conveyor and crane to move a distance of 100’ with a sample weight of 50 tons.

![Relative Cost Chart]

**Installation Time**

Installation time was derived by comparing the number of days it takes to install an air cushion vehicle, drag chain, conveyor or crane in a new plant or manufacturing facility to create a new move path.

![Relative Time Chart]

**Flexibility**

Flexibility is derived by counting possible ranges of motion for a drag chain, conveyor, crane or air cushion vehicle. The Air Cushion Vehicle offers nine points of flexibility or degrees of freedom: forward and backward, side-to-side, diagonal in four directions, 360 degree rotation, lift, and indexing.

![Relative Flexibility Chart]