

Load moving systems



Aero-Pallet™ systems

Aero-Pallet™ systems are designed to allow one person to move heavy loads safely and efficiently. The aluminium extrusion pallets utilize the efficiency of our proven air cushions and air film technology to float the load over the surface on a micro-thin layer of air. With this simple Aero-Caster® principle, one person can easily move several thousand pounds.

Many manufacturing applications

Aluminium extrusion Aero-Pallets™ are perfect for moving heavy bulky loads such as paper rolls, steel drums or other concentrated loads in warehousing applications. Automatic flow control valves compensate for offset loads and irregularities in the operating surface.

Aero-Pallets™ are also ideal for transporting loads in cleanroom environments, moving finished products to shipping and storage areas, precisely aligning machines over footings, moving modules, and rearranging entire production lines.

Easy maneuverability and precise alignment

Air cushions provide omnidirectional movement capability that allows for exceptional maneuverability around sharp corners and within tight spaces. The low lift height of the Aero-Pallets™ makes it easy to move loads in areas restricted by ceiling and door heights. Aero-Pallets™ are designed to safely move heavy loads.

Safety is built in

Aero-Pallet™ systems are safe for your operators to use. The system can be used around volatile liquids and gases safely, and your shop personnel will be working in a clean environment without the side-effects of internal combustion engine emissions. Aero-Pallets™ are designed to safely move heavy loads.

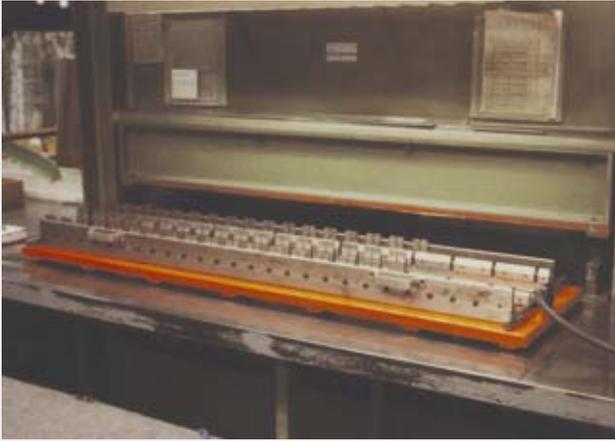
Cost-effective

Aero-Pallet™ systems can replace forklifts, cranes, pallet jacks and conveyors at a fraction of the cost. Pound for pound you can move loads less expensively as compared to other load moving alternatives. Aero-Pallet™ systems work with standard shop air and there are no moving parts that require costly maintenance. Since Aero-Pallets™ float the load over the surface and the load weight is spread evenly, critical stress to the floor surface is virtually eliminated.

For the specifications and advantages of the AirShuttle™, a variant of the Aero-Pallet™, see page 3.



AERO-PALLET™ SYSTEMS



Delicate equipment is moved into a press.



Aero-Pallet™ moves sensitive motor.

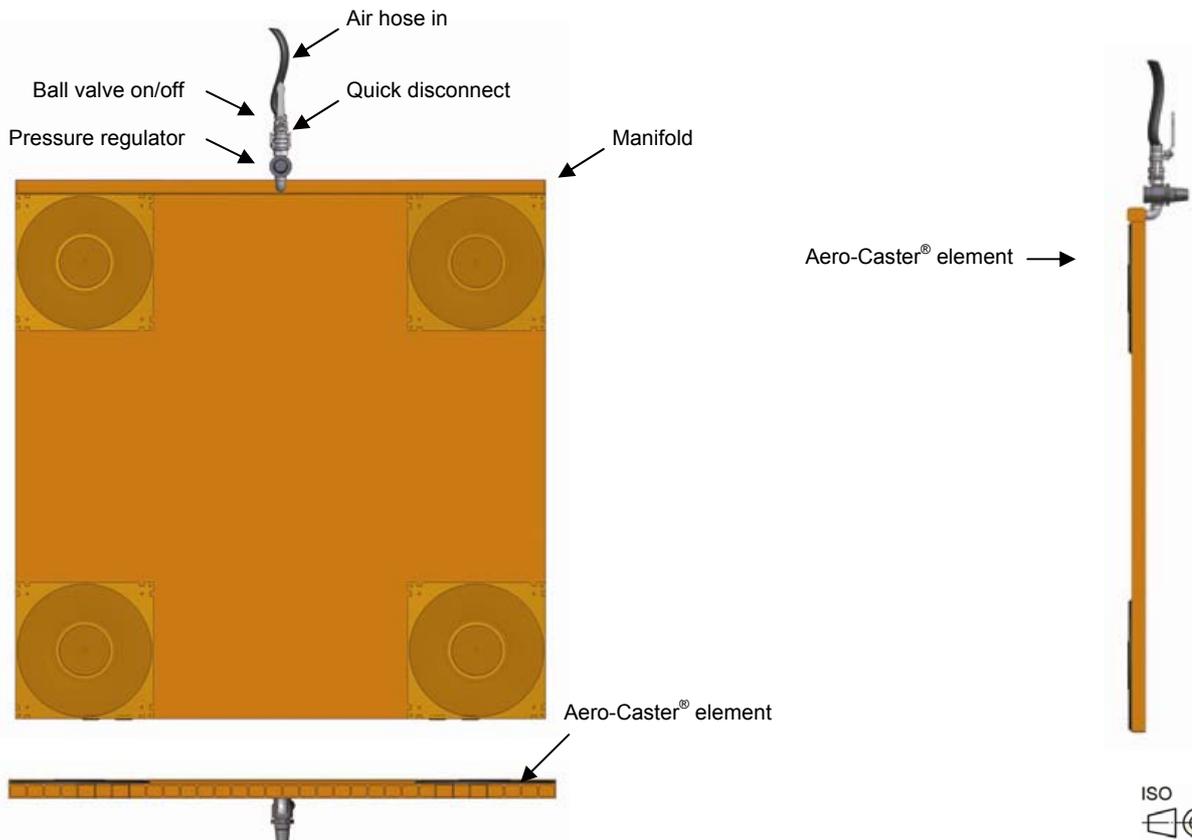


Bottom pallet moves table and tool too autoclave. Upper pallet moves tool into autoclave.



Recreation vehicles are being moved sideways in the production.

Configuration standard Aero-Pallet™ system



THE AIRSHUTTLE™

The AirShuttle™ is a variant of the Aero-Pallet™ and includes 4 Aero-Casters®, a T-handle, fingertip controls, a guide wheel, and no-load wheels.

| Model number | Capacity (kg) | Deck size Width x Length (mm) | Net weight (kg) | Fixed-Mount | |
|--------------|---------------|-------------------------------|-----------------|---------------------|------------------|
| | | | | Deck height ** (mm) | Lift height (mm) |
| AS-25 | 6.360* | 1.010 x 1.220 | 55 | 57 | 10 |

| Model number | Capacity (kg) | Deck size | | Fixed-Mount | |
|--------------|---------------|--|-------------------------------------|--------------------|------------------|
| | | Ideal widths available (mm) | Length available (mm) | Deck height** (mm) | Lift height (mm) |
| AS-25X | 6.360* | (Choose one) 1.105 1.120 1.210 1.300 1.435 1.530 1.620 1.710 | Range Min. = 815 Max. = 1.880 | 57 | 10 |

*Capacity note: 2.270 kg is the maximum that can be reasonably handled by one person on flat floors. Additional people may increase the capacity. The structural design capacity of the AS-25 is 6.350 kg.

** Height measured to top of deck when unloaded and Aero-Casters® are deflated. Height when loaded and deflated is 45 mm.

ADVANTAGES

- Glides much simpler than most other methods.
- Easily moves unloaded (without air) on no-load wheels.
- Precise – simple to operate in confined spaces.
- User friendly – fingertip controls.
- Control – move and turn in all directions.
- Safe – stable and low to the floor.
- Low profile, lower than 76 mm.
- No floor damage.
- Minimal maintenance.



The system is perfectly suitable for cleanroom applications and can be used without problems in the vicinity of volatile liquids and gasses.



The AirShuttle™ is used to move a 4 ton X-Ray cabinet.

THE AERO-CASTER® PRINCIPLE

An innovative and cost-effective solution for moving heavy loads



Many Aero-Caster® models to fit any application.



Load Module™ Aero-Caster® cross-section showing how the air floats during inflation.

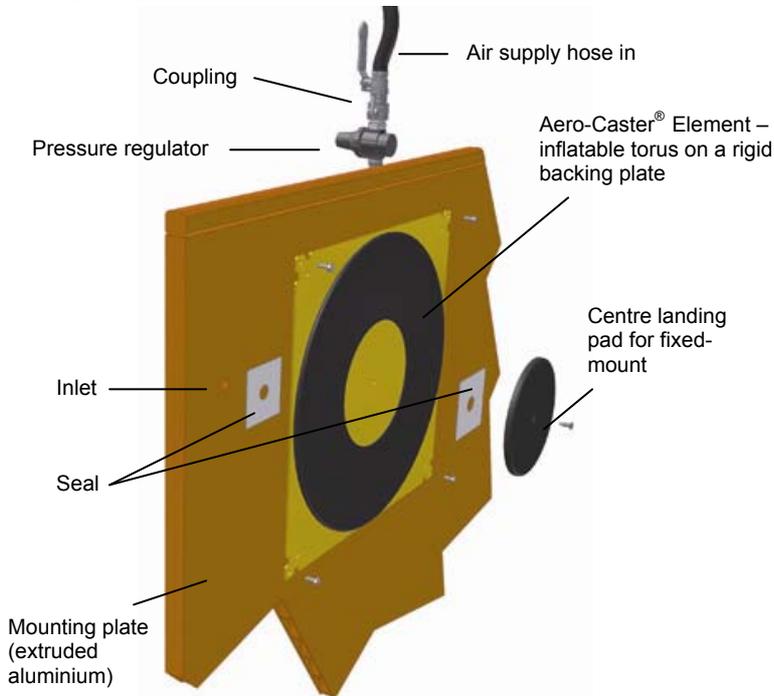
AeroGo equipment uses a variety of Aero-Casters® or air cushions to literally float heavy loads on a virtually frictionless film of air. Aero-Casters® air cushions offer a clean, noiseless and safe alternative for the movement of heavy loads.

Reduced friction and omni-directional movement allow the operator to precisely place and align the load in a limited work space. The low profile of standard air cushion systems requires less than 70 mm clearance. Aero-Casters® will not damage floors and expensive reinforcement is usually not necessary.

Because we only use basic pneumatic components such as air regulators and hoses, our products are not only reliable, but will operate in most environments, with minimal maintenance as compared to other conventional material handling methods.

Assembly of a fixed-mount Aero-Pallet™ Aero-Caster®

Slide mounted Aero-Casters® are also available



The Aero-Caster® principle

STEP 1

Load



Each pallet is equipped with 4 air cushions. Aero-Pallets™ are inserted under the load around the point of gravity. The air cushions are interconnected via a pressure regulator. The pallet rests firmly on landing pads which protect the Aero-Casters® torus and prevents it from being crushed by the load at rest.

STEP 2

Load



When air is being applied into the Aero-Casters®, the torus bag inflates, creating a seal with the floor. When all Aero-Casters® have been sealed to the floor, the pressure is being raised, thereby lifting the load.

STEP 3

Load



When the pressure in the chamber is sufficient to offset the load's weight (surface area x pressure), the pressure is slightly raised allowing the air to gradually escape between the flexible torus and the floor. The load is literally floating on a thin, nearly frictionless film of air of 0,08 to 0,13 mm, allowing the load to move omnidirectionally in complete 2D freedom.

SPECIFICATIONS OF THE AERO-PALLET™ SYSTEM (Fixed-Mount Aero-Casters®)

| Model (Insert code N = Neoprene T = Tuffcoat™ U = Urethane) (1) | Nominal system capacity (kg) (2) | Max. system capacity (kg) (2) | Aero- Caster® code (1) | Pallet surface area Min. - Max. (m²) | Pallet thickness (mm) | Effective lift height (mm) (3) | Req'd size plant air hookup (NPT) (inch) (4) | Operating pressure Rated - Max. (bar) (5) | Recommended air volume NI/sec - Nm³/min (6 & 7) | Equipment net weight (kg) |
|--|---|--|---------------------------------|--|-----------------------------|---|--|--|--|---------------------------------|
| 4P8 -- | 910 | 1.090 | 8 | 0,2 - 0,5 | 48 | 10 | 3/4 | 0,88 - 1,05 | 20 - 1,2 | 25 |
| 4P8 -- | 910 | 1.090 | 8 | 0,5 - 0,9 | 48 | 10 | 3/4 | 0,88 - 1,05 | 20 - 1,2 | 39 |
| 4P8 -- | 910 | 1.090 | 8 | 0,9 - 1,4 | 48 | 10 | 3/4 | 0,88 - 1,05 | 20 - 1,2 | 52 |
| AS-25 | 6.360 | Ask about the AirShuttle™. Includes a T-handle, fingertip controls, a guide wheel, and no-load wheels. Check specifications on page 3. | | | | | | | | |
| 4P12 -- | 3.630 | 4.360 | 12 | 0,4 - 0,9 | 48 | 19 | 3/4 | 1,75 - 2,1 | 40 - 2,4 | 39 |
| 4P12 -- | 3.630 | 4.360 | 12 | 0,9 - 1,4 | 48 | 19 | 3/4 | 1,75 - 2,1 | 40 - 2,4 | 52 |
| 4P12 -- | 3.630 | 4.360 | 12 | 1,4 - 1,9 | 48 | 19 | 3/4 | 1,75 - 2,1 | 40 - 2,4 | 66 |
| 4P12 -- | 3.630 | 4.360 | 12 | 1,9 - 2,3 | 48 | 19 | 3/4 | 1,75 - 2,1 | 40 - 2,4 | 80 |
| 6P12 -- | 5.450 | 6.530 | 12 | 2,3 - 2,8 | 48 | 19 | 3/4 | 1,75 - 2,1 | 60 - 3,6 | 95 |
| 6P12 -- | 5.450 | 6.530 | 12 | 2,8 - 3,3 | 48 | 19 | 3/4 | 1,75 - 2,1 | 60 - 3,6 | 109 |
| 6P12 -- | 5.450 | 6.530 | 12 | 3,3 - 3,7 | 48 | 19 | 3/4 | 1,75 - 2,1 | 60 - 3,6 | 123 |
| 6P12 -- | 5.450 | 6.530 | 12 | 3,7 - 4,2 | 48 | 19 | 3/4 | 1,75 - 2,1 | 60 - 3,6 | 136 |
| 4P15 -- | 6.350 | 7.620 | 15 | 0,7 - 0,9 | 48 | 22 | 3/4 | 1,75 - 2,1 | 46 - 2,8 | 41 |
| 4P15 -- | 6.350 | 7.620 | 15 | 0,9 - 1,4 | 48 | 22 | 3/4 | 1,75 - 2,1 | 46 - 2,8 | 54 |
| 4P15 -- | 6.350 | 7.620 | 15 | 1,4 - 1,9 | 48 | 22 | 3/4 | 1,75 - 2,1 | 46 - 2,8 | 68 |
| 4P15 -- | 6.350 | 7.620 | 15 | 1,9 - 2,3 | 48 | 22 | 3/4 | 1,75 - 2,1 | 46 - 2,8 | 82 |
| 6P15 -- | 9.530 | 11.440 | 15 | 2,3 - 2,8 | 48 | 22 | 3/4 | 1,75 - 2,1 | 70 - 4,2 | 98 |
| 6P15 -- | 9.530 | 11.440 | 15 | 2,8 - 3,3 | 48 | 22 | 3/4 | 1,75 - 2,1 | 70 - 4,2 | 116 |
| 6P15 -- | 9.530 | 11.440 | 15 | 3,3 - 3,7 | 48 | 22 | 3/4 | 1,75 - 2,1 | 70 - 4,2 | 125 |
| 6P15 -- | 9.530 | 11.440 | 15 | 3,7 - 4,2 | 48 | 22 | 3/4 | 1,75 - 2,1 | 70 - 4,2 | 138 |
| 4P21 -- | 12.700 | 15.240 | 21 | 1,2 - 1,4 | 51 | 29 | 3/4* | 1,75 - 2,1 | 53 - 3,2 | 59 |
| 4P21 -- | 12.700 | 15.240 | 21 | 1,4 - 1,9 | 51 | 29 | 3/4* | 1,75 - 2,1 | 53 - 3,2 | 73 |
| 4P21 -- | 12.700 | 15.240 | 21 | 1,9 - 2,3 | 51 | 29 | 3/4* | 1,75 - 2,1 | 53 - 3,2 | 86 |

Aero-Casters® may be operated at full pressure without problems.

Aero-Casters® operating at or below recommended pressures will obtain optimum performance and durability.

Minimum recommended weight is 5% of maximum capacity for the Standard Duty (N, T or U type) and 10% for the Heavy Duty (NHD, THD or UHD type) Aero-Casters®.

- (1) Identify Aero-Caster® series according to application requirements.
To complete the model number, insert **N** (Neoprene), **T** (Tuffcoat™) or **U** (Urethane) in the blank space.
- (2) Load must be positioned so individual Aero-Caster® capacities are not exceeded.
- (3) Variances depending on Aero-Caster® material - Consult factory.
- (4) Recommended for air supply hose length up to fifteen (15) meters, consult factory for longer lengths.
- (5) Recommended supply pressure: 1,75 bar above rated operating pressure.

- (6) At maximum load on smooth troweled and sealed concrete or equivalent.
(Includes Reserve Factor).

- (7) Listed for Neoprene (**N**), Tuffcoat™ (**T**) - for Urethane (**U**) multiply by 1,5.

* Use one (1) inch for all Urethane (**U**) systems.

All dimensions are nominal - Consult Factory for specifications.

For Floor Load Specifications - Consult Factory.

STANDARD EQUIPMENT

Air manifold on narrow end with 3/4-inch (19.1mm) NPT fitting.

Recommended for air supply hose lengths up to fifteen (15) meters.

Automatic Flow Control Valves: automatically compensate for offset loads and irregularities in floor surface.

Pressure regulator with gauge.

On/off valve for operator control.



OPTIONS

Handle - Waist high and "U" shaped. Made of 1 1/2" steel tubing. Ball valve and pressure regulator are mounted on cross member.

Slide-Mount Aero-Casters® - Eliminate the needs to unload the Aero-Pallet™ and turn it over for Aero-Caster® inspection/maintenance.

Spring Loaded, No-Load Wheels - Necessary if you wish to use Aero-Pallets™ as a pallet jack, or move the Aero-Pallet™ without floating it.

No Load Swivel Wheels - Same as spring loaded no load wheels except work load cannot be placed on deflated Aero-Pallet™.*

Supplementary Lift Bags - Provides additional lift height.

Fixed Roll Chocks - Permanently mounted on pallet surface to prevent rolls/reels from shifting while the Aero-Pallet™ is in motion.

Automatic Roll Chocks - Automatically activated when roll/reel is rolled onto Aero-Pallet™.

* Increases Aero-Pallet™ thickness (deflated height), reducing effective lift.

STANDARD LOAD MOVING SYSTEMS



Load Module systems™

AeroGo Load Module systems™ are perfect for the movement of massive loads from assembly to shipping; for plant start-ups or relocation; or for the repair of large equipment such as heat exchangers and transformers. Use them for jacking and rotating assemblies, precisely aligning machines over footings, moving modules and rearranging entire production lines. Load Module systems™ feature rugged Aero-Caster® air cushions, colour-coded hoses and a compact, easy to use control console.



Aero-Plank™ systems

Aero-Planks™ are designed for applications where the load is long and narrow. They also excel in intermittent flow assembly lines; other station-to-station applications, and in situations where access is limited to only one side of a load. Aero-Planks™ make it easy to transport and position shipping containers, mobile offices, shelter modules, heavy machinery, machine tools, etc. By using additional Aero-Planks™, load size and weight can be virtually without limit.



Aero-Pallet™ systems

AeroGo's standard line of aluminium Aero-Pallets™, replaces forklifts, cranes, pallet jacks and conveyors – often at a fraction of the cost. Versatile and rugged enough for almost any industrial environment, these products are available with a variety of options including handles, slide-mounted Aero-Casters®, spring-loaded no-load wheels, and guide wheels. For special applications ask about **AeroGo** custom engineered Aero-Pallets™ and transporters.



Aero-Jack™ systems

Aero-Jacks™ are built for continuous use in demanding rigging applications. With a nearly virtually limitless load capacity, Aero-Jacks™ make jacking loads fast and easy. Our inflatable Aero-Jacks™ are extremely lightweight and portable and have a very low profile when deflated (ca. 25 mm). They are easy to handle, store, transport and set up. Quality materials and construction assure long service life under the toughest rigging conditions.



Gapmaster™ Aero-Caster®

The Gapmaster™ is a specially developed air cushion which allows the smooth movement of loads over gaps, steps and height differences. Examples: wooden floors in theatres, cargo handling in aircrafts, loading of containers and trucks from terminals.



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