

## Load moving systems



### Load Module systems™

**AeroGo** Load Modules™ utilize the efficiency of fluid film technology to actually float heavy loads on a near-frictionless film of air. One person can easily move thousands of pounds with Load Module™ Aero-Casters®.



### Versatility and efficiency

Load Modules™ combine simplicity of operation with extreme versatility. Load movement is easy, exceptionally smooth, omnidirectional and can be performed anywhere in the work environment where there is an adequate floor surface. Operation in tight spaces is a breeze.



Load Module™ Aero-Casters® distribute the load weight over a greater surface than with rollers or wheels, spreading any stress over a wider floor area. This eliminates damage to the floor and the need for expensive tracks, reinforced floors and building structures.

Load Modules™ are easily portable and can be positioned under the load according to load weight distribution and support points. This minimizes stress on the load structure.

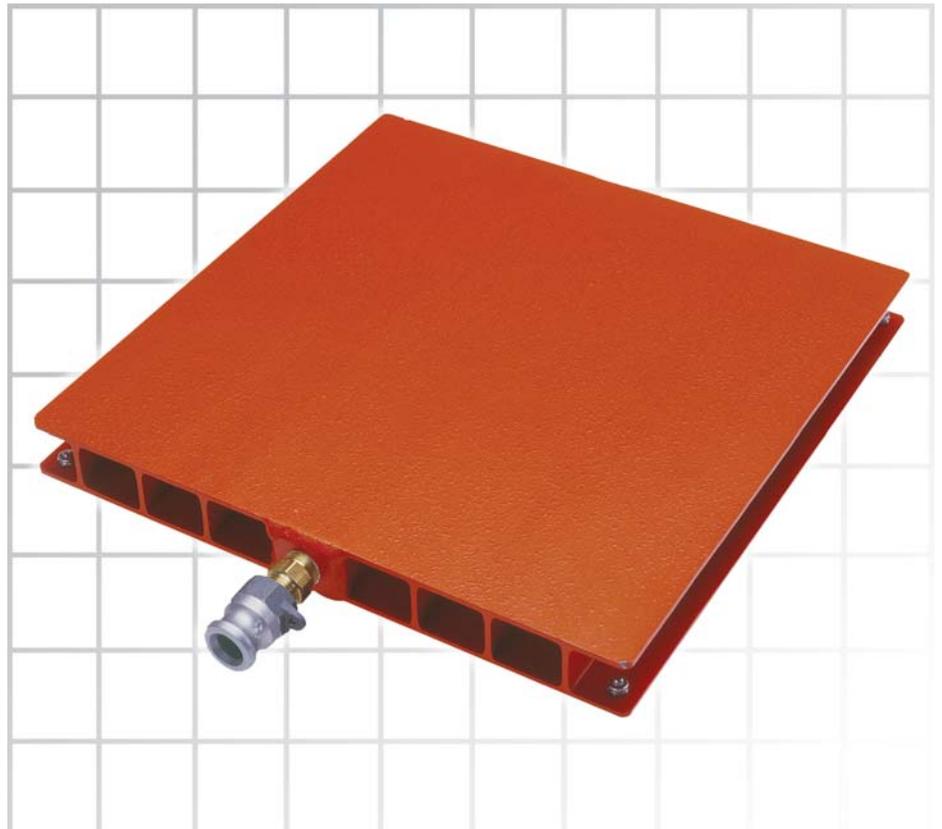


### Cost-effective

**AeroGo** systems are more cost-effective than traditional load movement methods. Your own personnel can quickly learn to utilize the system. And, since there are no moving parts, maintenance costs are minimal.

### Unlimited applications

Load Modules™ are manufactured to stand up to the most demanding applications. They are perfect for the movement of massive loads from assembly to shipping; for plant start-up or relocation; or for the repair of large and bulky items such as heat exchangers and transformers. Load Modules™ are ideal for jacking or rotating assemblies without disassembling them, precisely aligning machines over footings, moving modules, and rearranging entire production lines.



## LOAD MODULE SYSTEMS™



X-ray equipment is being moved into a hospital through a door with minimal clearance. Your own personnel can quickly learn to utilize the system. And, since there are no moving parts, maintenance costs are minimal.



Difficult horizontal moves in narrow spaces are easy to accomplish. Nuclear reactor head, 75 tons.



Moving on air is easy and keeps your floors clean and undamaged. CNC machine, 10 tons.



No stress on air allows moving and precisely positioning a 27m oven of 18 tons. This eliminates the need to disassemble the long and delicate machine.



Aero-Caster® technology moves three racks, 10 tons each, in 2 hours using only 3 people. Old moving method used 3 people and took a week to make the same move.



Press, 60 tons.



Glass bottle machine, 40 tons.  
By courtesy of Bottero, IT-Cuneo.



Launching of a mine sweeper, 200 tons.



Tunnel drill head, 180 tons.



Ship Azipot in dry dock, 200 tons.



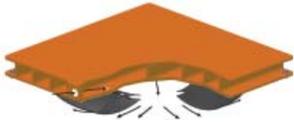
Low profile models in small spaces allow lifting heavy loads.

# 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.

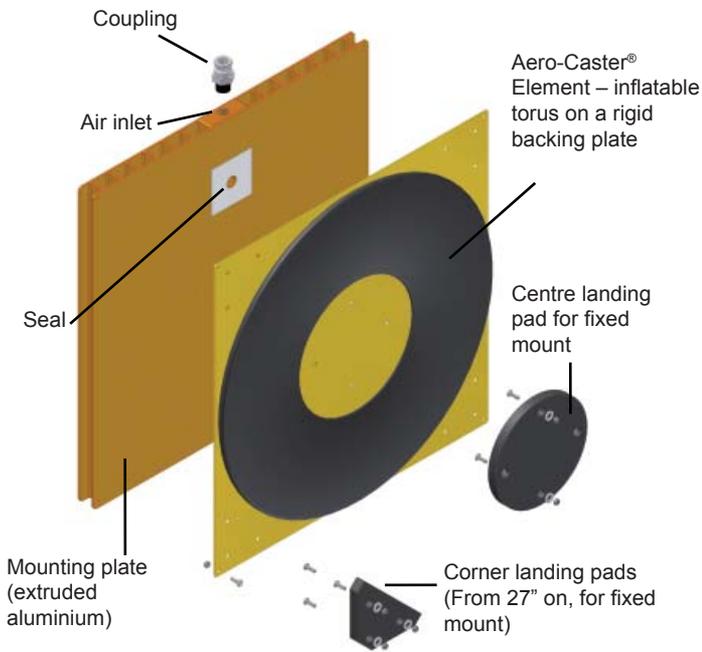
**AeroGo** equipment uses a variety of Aero-Casters® or air cushions to literally float heavy loads on a virtually frictionless film of air. Aero-Casters® air cushions offer a clean, noiseless and safe alternative for the movement of heavy loads.

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 Load Module™ Aero-Caster®

Slide mounted Aero-Casters® are also available



## The Aero-Caster® principle

### STEP 1



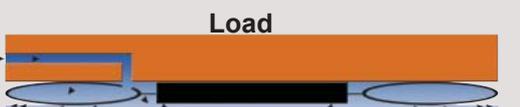
Minimum 3 or more Load Modules™ (typically 4) are placed under the load around the centre of gravity and connected to a control console. The Load Modules™ are solidly supported on landing pads to protect the Aero-Caster®'s torus bag from being crushed when the load is at rest.

### STEP 2



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



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 LOAD MODULE SYSTEMS™ (Fixed- and slide-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)	FIXED MOUNTED		SLIDE-MOUNTED		Req'd size plant air hookup (NPT) (inch) (4)	Control console	Operating pressure Rated - Max. (bar) (5)	Recommended air volume NI/sec - Nm³/min (6 & 7)	Equipment net weight (kg)
				Dimensions of each Load Module™ (mm)	Effective lift height (mm) (3)	Dimensions of each Load Module™ (mm)	Effective lift height (mm) (3)					
4K8_L	910	1.100	8_	202 x 203 x 48	10	295 x 203 x 51	6	1/2	BN34	0,88 - 1,05	20 - 1,20	39
6K8_L	1.400	1.600	8_	203 x 203 x 48	10	295 x 203 x 51	6	1/2	BN66	0,88 - 1,05	30 - 1,80	57
4K8_HDL	1.800	2.200	8_HD	203 x 203 x 48	10	295 x 203 x 51	6	1	BN64	1,75 - 2,10	26 - 1,60	39
6K8_HDL	2.700	3.300	8_HD	203 x 203 x 48	10	295 x 203 x 51	6	1	BN66	1,75 - 2,10	40 - 2,40	57
4K12_L	3.600	4.400	12_	305 x 305 x 48	19	422 x 305 x 51	13	3/4	BN34	1,75 - 2,10	40 - 2,40	41
6K12_L	5.450	6.500	12_	305 x 305 x 48	19	422 x 305 x 51	13	3/4	BN66	1,75 - 2,10	59 - 3,60	59
4K15_L	6.350	7.600	15_	381 x 381 x 48	22	499 x 381 x 51	16	3/4	BN64	1,75 - 2,10	46 - 2,80	48
4K12_HDL	7.300	8.700	12_HD	305 x 305 x 48	19	422 x 305 x 51	13	1	BN64	3,50 - 4,20	40 - 2,40	48
6K15_L	9.500	11.400	15_	381 x 381 x 48	22	499 x 381 x 51	16	3/4	BN66	1,75 - 2,10	69 - 4,20	70
6K12_HDL	10.900	13.100	12_HD	305 x 305 x 48	19	422 x 305 x 51	13	1	BN66	3,50 - 4,20	59 - 3,60	66
4K21_L	12.700	15.200	21_	533 x 533 x 51	29	664 x 533 x 54	22	3/4	BN64	1,75 - 2,10	53 - 3,20	68
4K15_HDL	12.700	15.200	15_HD	381 x 381 x 48	22	499 x 381 x 51	16	1	BN64	3,50 - 4,20	66 - 4,00	57
6K21_L	19.100	22.900	21_	533 x 533 x 51	29	664 x 533 x 54	22	3/4*	BN66	1,75 - 2,10	79 - 4,80	100
6K15_HDL	19.100	22.900	15_HD	381 x 381 x 48	22	499 x 381 x 51	16	1	BN66	3,50 - 4,20	99 - 5,90	82
4K27_L	21.800	26.100	27_	686 x 686 x 62	35	867 x 686 x 65	32	3/4*	BN64	1,75 - 2,10	59 - 3,60	123
4K21_HDL	25.500	30.500	21_HD	533 x 533 x 51	32	664 x 533 x 54	22	1-1/4	BN64	3,50 - 4,20	99 - 5,90	77
6K27_L	32.500	39.200	27_	686 x 686 x 62	35	867 x 686 x 65	32	1	BN66	1,75 - 2,10	89 - 5,40	182
4K36_L	36.500	43.500	36_	914 x 914 x 68	44	914 x 914 x 71	38	1-1/4	BN64	1,75 - 2,10	79 - 4,80	193
6K21_HDL	38.000	45.700	21_HD	533 x 533 x 51	32	664 x 533 x 54	22	1-1/4	BN66	3,50 - 4,20	149 - 8,90	111
4K27_HDL	43.500	52.300	27_HD	686 x 686 x 62	38	867 x 686 x 65	32	1-1/4	BN84	3,50 - 4,20	132 - 7,90	136
6K36_L	54.500	65.300	36_	914 x 914 x 68	44	1095 x 914 x 71	38	1-1/4	BN66	1,75 - 2,10	119 - 7,10	284
6K27_HDL	65.300	78.300	27_HD	686 x 686 x 62	38	867 x 686 x 65	32	1-1/4	BN86	3,50 - 4,20	198 - 11,90	202
4K48_L	72.500	87.100	48_	1219 x 1219 x 68	67	1400 x 1219 x 71	57	1-1/2	BN84	1,75 - 2,10	86 - 5,20	329
4K36_HDL	72.600	87.100	36_HD	914 x 914 x 68	48	1095 x 914 x 71	38	1-1/4	BN84	3,50 - 4,20	149 - 8,90	206
6K48_L	109.000	130.600	48_	1219 x 1219 x 68	51	1400 x 1219 x 71	57	1-1/2	BN86	1,75 - 2,10	129 - 7,70	493
6K36_HDL	109.000	130.600	36_HD	914 x 914 x 68	48	1095 x 914 x 71	38	1-1/2	BN86	3,50 - 4,20	222 - 13,30	299
4K48_HDL	145.200	174.200	48_HD	1219 x 1219 x 68	76	1400 x 1219 x 71	57	1-1/2	BN84	3,50 - 4,20	165 - 9,90	356
6K48_HDL	218.000	261.300	48_HD	1219 x 1219 x 68	76	1400 x 1219 x 71	57	1-1/2	BN86	3,50 - 4,20	248 - 14,90	540
4K60UHDL	218.000	261.300	60UHDL	1524 X 1524 X 70	89	NB**	NB**	1-1/2	BN84	3,50 - 4,20	396 - 23,80	526
6K60UHDL	326.600	391.900	60UHD	1524 X 1524 X 70	89	NB**	NB**	2	BN86	3,50 - 4,20	594 - 35,64	752

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®.

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

(6) At maximum load on required 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.

\*\* Not available.

All dimensions are nominal - Consult factory for specifications.

For Floor Load Specifications - Consult factory.

## STANDARD EQUIPMENT

Specified number of Load Module™ Aero-Casters® (4 or 6).

Control Console with regulators to control pressure/volume to each Load Module™ Aero-Caster®.

Interconnecting hoses - 6 m. in length for each Load Module™ (4 or 6).

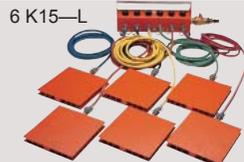
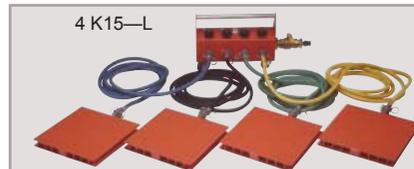
Quick disconnect fittings for all interconnecting hoses.

On/off ball valve for system control.

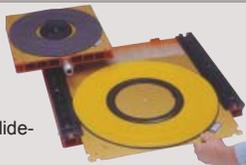
## OPTIONS

Heavy Duty or economy storage carts are available to store your Load Module system™ when not in use.

Safety fuses.



Fixed or slide-mounted



Fixed control console



Safety fuses



Storage cart

# STANDARD LOAD MOVING SYSTEMS



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## 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™, replace 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® systems

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



**AeroGo Europe nv**  
Kloosterstraat 107  
**BE-2180 EKEREN**  
BELGIUM

E-mail: [info@erogo.be](mailto:info@erogo.be)  
Website: [www.aerogo.be](http://www.aerogo.be)

Tel.: + 32/(0)3/ 546.39.00  
Fax: + 32/(0)3/ 546.39.39

Deutschland: + 49/(0)241/ 91.14.24  
UK: + 44/(0)1732/ 36.00.54

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