The Ban-Air concept is centered on maximizing storage capacity and reducing under-utilized storage space to effectively BAN the wasteful storage of AIR! The Air Pallet Rack has been custom designed for the efficient storage of aluminum aircraft pallets, particularly the 463L / ALOC model.

Ban-Air® Storage Systems is a leading manufacturer and turnkey supplier of high quality, durable storage and handling solutions. With over a decade of experience and hundreds of installations completed worldwide, Ban-Air has developed a unique product offering to provide highly versatile and effective solutions to address any storage problem.
TRADITIONAL STORAGE METHODS

DUNNAGE, UNSTACKABLE, RESTRICTED ACCESS

ALOCs / 463Ls are stored both fully loaded and as empty skids and are also used extensively for the staging of loads, presenting handling challenges.

AIRCRAFT PALLETS

- Present unique storage and handling challenges
- Are used extensively for staging loads
- Require huge storage areas
- Require wooden blocks (‘dunnage’) to allow for forklift truck handling

DUNNAGE

Without wooden blocks, flat bottomed pallets cannot be handled - using dunnage is labor intensive and inefficient for the strategic storage of air pallets.

WARNING, DO NOT STACK!

Staged or fully-loaded air pallets cannot be stacked on top of each other due to great weights and inevitable product damage that would occur. Therefore, each air pallet simply occupies ground space, wasting the cubic potential of a warehouse.

STORAGE / STAGING

Typically, product is staged onto the empty air pallet piece by piece until all items are available to be fully cargo-prepared for shipment or strategic storage. Such air pallets quickly occupy all available warehouse floor space as there is no way of stacking loaded or semi-loaded pallets. One of the biggest failures of existing methods of air pallet storage is the inaccessibility of individual pallets for rapid deployment. Since all floor area is covered with loaded, or semi-loaded air pallets, retrieving the required pallet is a time-consuming, labor-intensive process, requiring the delicate handling of pallets - which may not yet have cargo secured - and necessary dunnage blocks. This is inevitably a 2+ person operation which restricts rapid deployment capability.

Recognizing these problems, Ban-Air Storage Systems have developed a heavy duty solution uniquely for this air pallet storage application, ideal for military users worldwide.

BAN-AIR AIR PALLET RACK

STORAGE SOLUTIONS FOR YOUR LOGISTICAL CHALLENGES

Ban-Air Air Pallet Rack (for ALOC / 463L) is the first custom designed rack for the storage of air pallets available.

ACCESS THE PALLET YOU NEED, WHEN YOU NEED IT!

- Ready for immediate deployment
- For every level extra that product is stored vertically, storage space is doubled, tripled....and is better organized
- Increased warehouse capacity and operational effectiveness
- No requirement for wooden blocks (‘dunnage’)

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Poor space utilization
Poor deployment capability
Labor intensive handling
Limited expansion potential for increased operations
Drain on warehouse potential

Enable air pallet stacking, whether simply staged, or fully cargo loaded
Optimize varied warehouse size configurations
Maximize cubic space, rather than floor area
Eliminate need for dunnage blocks
Facilitate strategic inventorying of air pallets
Enable immediate access to any pallet for rapid deployment
Withstand years of demanding service
......save money!

AIR PALLET RACK - SYSTEM BENEFITS

TRADITIONAL AIR PALLET RACK STORAGE
BAN-AIR AIR PALLET RACK
TWO 5 BAY AIR PALLET RACK SYSTEMS BACK-TO-BACK WITH CENTRAL WALKWAY

STANDARD 8FT CARGO LOAD (TOP POSITION)

STANDARD 8FT CARGO LOAD (GROUND POSITION)

ISU 90 CONTAINER

GROUND LEVEL POSITION FORK ENTRY BARS

PLATFORM WITH FORK ENTRY BARS (ADJUSTABLE EVERY 8 INS IN HEIGHT)

SAFETY HANDRAIL

GALVANIZED MESH WALKWAY PANEL

CENTRAL WALKWAY WITH DOUBLE SIDE SAFETY HANDRAIL

HEAVY DUTY PROTECTION BARRIERS

STAIRWAY (DOUBLE SIDED HANDRAIL)
AIR PALLET RACK SYSTEM CONSTRUCTION

Heavy-gauge, all bolted structural steel construction available in a variety of configurations to adapt to your ceiling height, warehouse layout, and forklift capacity (height and weight).

Bolted construction of members allows for replacement of damaged parts should serious collisions occur, and allows for reconfiguration of the racks where a move is necessary.

The knock-down construction for shipment purposes eliminates wasted space, maximizing transport effectiveness.

Forklift access to each pallet level is provided by way of front-to-rear runners, constructed from hot-rolled sections. NO MORE DUNNAGE!
AIR PALLET RACK SYSTEM EXTERIOR GRADE FINISH

The Ban-Air Air Pallet Rack is finished as standard with a full hot-dip zinc galvanized exterior treatment to withstand the toughest environmental conditions, allowing installation of the racks both indoors and outside.

Using the Ban-Air Air Pallet Rack to provide outside storage for air pallets gives great potential to expand your storage beyond the physical limits of your building, and provides excellent pre-staging of loaded pallets in readiness for a timely and organized loading operation.

CONFIGURATIONS: WALKWAY & OPTIONAL ROOF SYSTEMS

STANDARD AIR PALLET RACK SYSTEM WITH WALKWAY AND STAIRS:

TWO ROWS OF AIR PALLET RACK CONNECTED WITH AN INSPECTION WALKWAY WITH A STAIRCASE AT EACH END OF THE SYSTEM FOR PERSONNEL ACCESS (AVAILABLE FOR ALL AIR PALLET RACK SYSTEMS).

STANDARD AIR PALLET RACK SYSTEM WITH WALKWAY, STAIRS AND ROOF:

TWO ROWS OF AIR PALLET RACK CONNECTED WITH AN INSPECTION WALKWAY WITH A STAIRCASE AT EACH END OF THE SYSTEM COMPLETE WITH ROOF (AVAILABLE FOR ALL AIR PALLET RACK SYSTEMS).
The Ban Air Engineering Department strives to bring continuous improvements to our storage solutions, developing new products and providing technical support for special projects, often within locations with severe environments and extreme climatic conditions.

We utilize the very latest engineering software, hardware and techniques:

- Design, analysis, testing and validation of mechanical parts, assemblies and structures according to international norms and safety standards
- Full maintenance and latest releases of AutoCAD®, SolidWorks®, SolidWorks Simulation Professional® and StaadPro®
- Analysis and computer simulations based on Finite Element Analysis (FEA) software
- Prediction of physical behaviour of any part, assembly or structure under any loading condition, simulating real-world operating conditions through Computer-Aided Engineering (CAE)
- Wide range of possible analyses, scenarios and computerized simulations including stress, strain and displacement, seismic simulation, thermal heat transfer, drop test analysis and many more
- Structural analysis and design to monitor exposure to static loading or dynamic response, including soil-structure interaction, wind, earthquakes and moving loads
- Translation of models into production technical drawings, 3D visuals and animations to allow virtualization of prototype models prior to manufacture
- Prototyping and validation of products through physical testing

Ban-Air products are manufactured using the latest Computer Numerical Control (CNC) cutting, punching and bending technology along with laser-profiling and custom-rolled sections. Depending on the component, all welding is performed by certified welders or by mechanized programmable robotic welding technology.

Ban-Air is actively engaged in the study and adaptation of its storage solutions to meet stringent safety standards in the most demanding of environments.

All of our rack systems are designed according to Rack Manufacturers Institute (RMI), European Federation of Materials Handling (FEM) and Universal Building Code (UBC) guidelines, which all consider seismic activity.

Our Seismic Solutions are specially enhanced systems for superior strength and rigidity. They are suitable for regions that lie on fault lines or experience high levels of seismic activity.

All of our systems can be analysed, and where necessary updated, to accommodate a wide range of seismic and environmental conditions.

Call our offices today for more information.

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**PRODUCT SUMMARY**

<table>
<thead>
<tr>
<th>Overall Rack Height* (ft)</th>
<th>Maximum Top Beam Height** (ft)</th>
<th>Maximum Top Beam Height** (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
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<tr>
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<td>18.4</td>
<td>5599</td>
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</tbody>
</table>

(*) Without shimming
(**) Measured from the bottom side of the beam to the floor

The number of platforms in each different height system illustrated above is required for rack stability.