

Strength in Protection



International Export Livestock Pens for Air Freight Transport

We challenged ourselves to improve our share in the livestock export pen market, and to provide a more diverse crate range. We met and surpassed this challenge with an innovative range of pens cleverly designed to suit a range of aircraft. This new pen range maximises aircraft space and provides a potential increase in up-lift capacity of 20%.

Our Requirements

- To develop a range of air freight livestock pens suitable for livestock transport on a range of different aircraft.
- To ensure the pens comply with current International Air Transport Association (IATA) guidelines.
- To ensure the pens comply with export controls of the Australian Quarantine and Inspection Service (AQIS).

Our Challenges

- To ensure the pen were flexible in their configurations to maximise use of space on a range of different aircraft.
- To balance pen weight against pen strength when choosing construction materials.
- To build pens that ensure humane conditions for livestock and to minimise potential livestock loss.
- To consider all above challenges whilst still complying with IATA and AQIS requirements.



A three tier upper deck livestock pen. The dished carpet can be seen inside the open sliding doors.

Our Solution

We developed a range of six livestock pens -

1. Single tier lower deck livestock pen.
2. Two tier lower deck livestock pen.
3. Two tier lower deck livestock pen (PLB).
4. Two tier offset floor lower deck livestock pen.
5. Two tier upper deck livestock pen.
6. Three tier upper deck livestock pen.

Each tier level has the ability to hold 30-35 goats.

- External battens and uprights are used to reduce internal timber projections that have the potential to injure the livestock when they perform "thermal circulation" for group heat control.
- Careful selection of pine timber cross sections are used to achieve the best balance of pen weight against pen strength.
- All pens are built with no floor on the ground level to reduce production cost and weight.
- Sliding doors enable the bottom floor door to be independently opened, so livestock only need to be removed from this level only prior to lifting. The change to sliding doors also overcame OHS with ladder climbing required for previous top drop doors.
- Forklift lifting lugs are built into the pen to increase moving stability.
- All levels of all tiers have "dished" plastic and carpet lining. This provides a leak-proof non-slip membrane that prevents leakage of animal waste.



A two tier lower deck livestock pen (PLB)



A single tier lower deck livestock pen.