

## Strength in Protection



### Cable Drum Secured to a Modified Reverse Base Pallet

Axis Packaging were required to secure a 1500kg high voltage electrical cable drum for transport on an international passenger aircraft. The greater cargo height restriction, compared to that of freighter aircraft, required the modification of a standard reverse base pallet.

#### Client Requirements

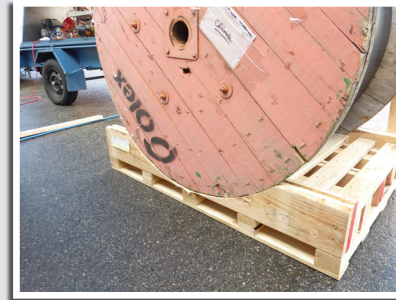
- To secure a 1500kg high voltage electrical cable drum for transport on an international passenger aircraft. (Although height restrictions are not as limiting on airfreight flights, there were no international airfreight flights out of Perth. If the drum could not be secured on a Perth international passenger flight, then it would have to be road transported to the eastern states before uplift on an international airfreight flight. This would have resulted in a significant delay in international delivery.)

#### Our Challenges

- The potential for cable drooping required that the cable drum be transported upright with no lashings, dunnage or bracing coming into contact with any of the cable. This meant that the entire weight of the cable drum was born on the outside circular rim of the drum and therefore the rim alone had to be used to secure and support the full drum and cable weight.
- The drum required the strength of a reverse base pallet to fully support its weight. A standard reverse base pallet is 250mm, but there was only an allowance of 155mm between the drum height of 1450mm and the maximum external cargo height of 1600mm.

#### Our Solution

- A standard reverse base pallet was modified to allow the cable rim to drop into the base and therefore meet the height restrictions.
- The pallet modification included creating a cradle to distribute the weight of the cable drum across a greater area of the rim.
- To increase stability of the drum, lateral and vertical dunnage was incorporated into the modified pallet design and two 2500kg ratchet straps were used to further secure the drum to the pallet.



The modified reverse base pallet showing how the cable rim was allowed to drop into the base to meet the height limitations of the passenger aircraft.

One of the vertical timber dunnage pieces being attached to the pallet and the cable drum.



The cable drum on the reverse base pallet with all the lateral and vertical timber dunnage pieces attached.

The cable drum fully secured to the modified reverse base pallet with timber dunnage and ratchet straps in place.

