



ADVANCED DESIGN REFRIGERATOR-300 (ADR-300)

PURPOSE:

The Advanced Design Refrigerator (ADR-300) is a lightweight, highly durable and highly insulated refrigerated container system optimized for internal air transport by military fixed and rotary winged aircraft. It is the premier refrigerated container system used to support AF and BEAR field feeding, medical, and mortuary affairs requirements.

CHARACTERISTICS:

The ADR-300 stores chilled or frozen UGR-A™ rations and other perishables to support remote site and base camp feeding operations in austere environments. The system can be placed in any one of the five 463L pallet positions available on a C-130 aircraft, optimizing available transport space. Temperature control is provided by a modified, electrically driven, COTS refrigeration unit that provides temperature control from 80°F down to 0°F in ambient temperature as high as 125°F, and a digital thermostat provides an interior set-point temperature and manual defrost control. The item is composed of fiberglass reinforced plastic skinned composite panels that are mounted on a formed aluminum pallet base. The interior features racks with five removable/adjustable shelves on each side wall, while integrated four-way forklift pockets allow for ease of forklift transport.

CAPABILITIES & BENEFITS:

- Provides precise temperature control for refrigerated or frozen group rations in hot and arid climates.
- Extremely thermally efficient design maintains safe food temperatures during flight or loss of power.
- Is multi-modal transportable by air, land and rail.
- Is Internal Cargo Aircraft Certified by the Air Transport Test Load Agency.
- Is Helicopter Sling Certified.
- Has 463L compatible cargo rails for easy Military aircraft "roll on/roll off" capabilities.
- Tie down provisions meet MIL-STD-209 requirements.
- Reduces transportation footprint and logistical footprint of other refrigeration equipment.

COMMENTS:

Over 800 ADRs were procured and fielded by the BEAR Weapons Systems Office and CFD in 2005-2006. These are currently in use by the AF.

POINT OF CONTACT:

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AT A GLANCE:

■ CAPACITY:

285 cu ft (8 cu m): 10,500 BTU/hr @ 35°F to 110°F (1.67°C to 43°C) and 5200 BTU/hr @ 0°F to 110°F (-17°C to 43°C)

■ DIMENSIONS:

- Exterior Dimensions (with airlift rails): 88 in L x 108 in W x 96 in H (224 x 274 x 244 cm)
- Exterior Dimensions (without airlift rails): 85 in L x 105 in W x 96 in H (216 x 267 x 244 cm)
- Interior Dimensions: 80 in L x 75 in W x 81 in H (203 x 191 x 206 cm)

■ WEIGHT:

- Max. Gross Weight: 10,000 lbs (4,536 kg)
- Tare Weight (Including refrigeration unit): 3,285 lbs (1,490 kg)
- Payload Weight: 6,715 lbs (3,046 kg)

■ UTILITIES/POWER:

208/230 Volt AC, 3-Phase 50-60 Hz

■ REFRIGERANT:

Environmentally friendly refrigerant, R-404A

■ TRANSPORTATION:

Transported by military aircraft (C-141, C-5A, C-17 and C-130), 5-ton Family of Medium Tactical Vehicles (FMTV), rail car or by 10,000 lbs (4,536 kg) forklift.

