



LM-100J

ONE AIRCRAFT, MANY CAPABILITIES

LOCKHEED MARTIN



COMMERCIAL FREIGHTER



LM-100J

Length..... 112 ft 9 in/34.37 m
Height 38 ft 10 in/11.84 m
Wingspan..... 132 ft 7 in/40.41 m
Power Plant four Rolls-Royce AE 2100D3
GE-Dowty Aerospace R391
6-blade propellers, all composite

Maximum take-off weight (2.5 g)..... 164,000 lb/74,389 kg
Payload (2.5 g)*..... 45,800 lb/20,775 kg
Operating weight empty..... 80,350 lb/36,446 kg
Zero fuel weight**126,000 lb/57,153 kg
Landing distance (135,000 lb).....3,100 ft/945 m
Range (40,000 lb payload) 2,390 nm/4,425 km
Maximum cruise speed.....355 KTAS/660 km/hr

*Higher payload allowable with wing relieving fuel

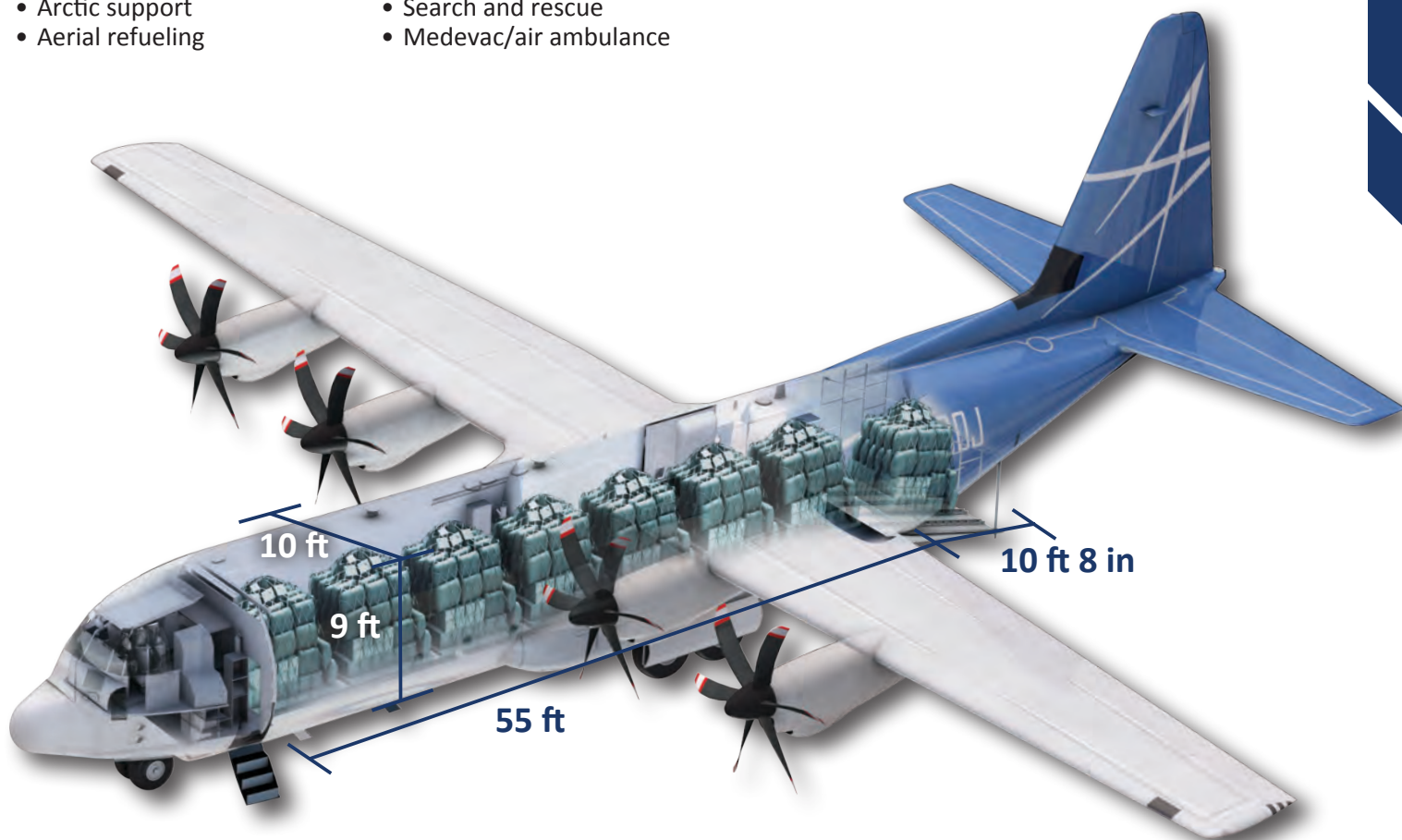
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MULTIPLE CAPABILITIES

The LM-100J's operational flexibility enables it to support a variety of tasks. Multiple roll-on/roll-off (RO/RO) configurations are available to expand the airplane's capabilities.

Typical roles include:

- Oversized cargo transport
- Aerial spray
- Oil and gas exploration
- Arctic support
- Aerial refueling
- Mining logistics operations
- Aerial firefighting
- Aerial delivery
- Search and rescue
- Medevac/air ambulance
- Humanitarian relief operations
- VIP/passenger transport
- Austere field ops



Capabilities include:

- Unique oversized payload and airdrop capability
- Truck bed height loading ramp—no special handling equipment needed
- Worldwide access to austere locales and short runways
- Construction support for developments at locations not typically reachable by classic air assets
- Proven Arctic operations
- Reduced operating costs
- Adverse weather and night capable
- Provisions for commercial cargo system

INCREASED PERFORMANCE AND EFFICIENCIES

Rolls-Royce AE 2100D3 engines and six-bladed GE-Dowty Aerospace R391 composite propellers improve aircraft performance over legacy aircraft.

- Greater take-off thrust
- Increased maximum airspeed
- Carries greater payloads farther
- Operates out of shorter airfields
- Climbs faster and cruises at higher altitudes
- Operates at longer ranges
- Maintains power in high/hot day conditions



ADVANCED COCKPIT

- Color, digital moving map
- Ground Collision Avoidance System (GCAS)
- Traffic Collision and Avoidance System (TCAS)
- Night vision compatible Head-Up Display (HUD)
- Terrain Awareness and Warning System (TAWS)
- Computer monitored aircraft system
- Flight Management System (FMS)
- Inertial Navigation System (INS)
- Dual Global Positioning System (GPS) systems
- Low noise interphone system
- Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM)
- Multi-mode color radar
 - Ground map
 - Weather mode
 - Wind shear detection

THE AIRTANKER FOR THE 21ST CENTURY

The LM-100J builds on the proven military C-130 Hercules and the civil L-100 aircraft, which set the standard for rugged multi-mission aircraft. When equipped with the International Airtanker Board (IAB)-approved Retardant Delivery System (RDS), the LM-100J provides commercial market readiness with outstanding performance as a Large Airtanker while maintaining its full cargo capabilities.



RETARDANT DELIVERY PERFORMANCE

The LM-100J equipped with the selected RDS is:

- Able to carry up to 5,000 U.S. gallons of retardant
- Optimized for slow, low altitude retardant application because of its legacy performance
- An effective, efficient, and safe aircraft/RDS configuration available for fire suppression missions
- Capable of delivering a constant flow rate and consistent retardant coverage up to Coverage Level (CL) 12 by using computer-controlled tank doors



... AND VERSATILITY

The RDS consists of mission specific components that are easily installed or removed in less than two-and-a-half hours, maintaining the full multi-mission utility of the aircraft.

The LM-100J is also able to operate and internally transport the Modular Aerial Firefighting System II (MAFFS II) and other MAFFS support equipment. It can be loaded directly into the back cargo compartment without the use of special handling equipment.

PASSENGER SEATING SYSTEMS

Lockheed Martin works with specific suppliers to provide passenger palletized systems for the LM-100J.

These RO/RO systems can be utilized in various configurations, standard or customized, for multiple types of missions.

Pallets can hold up to 15 passengers with economy class seating or as few as four passengers with business class seating; configurations can include galleys or lavatories or a combination of seating with galleys or lavatories.

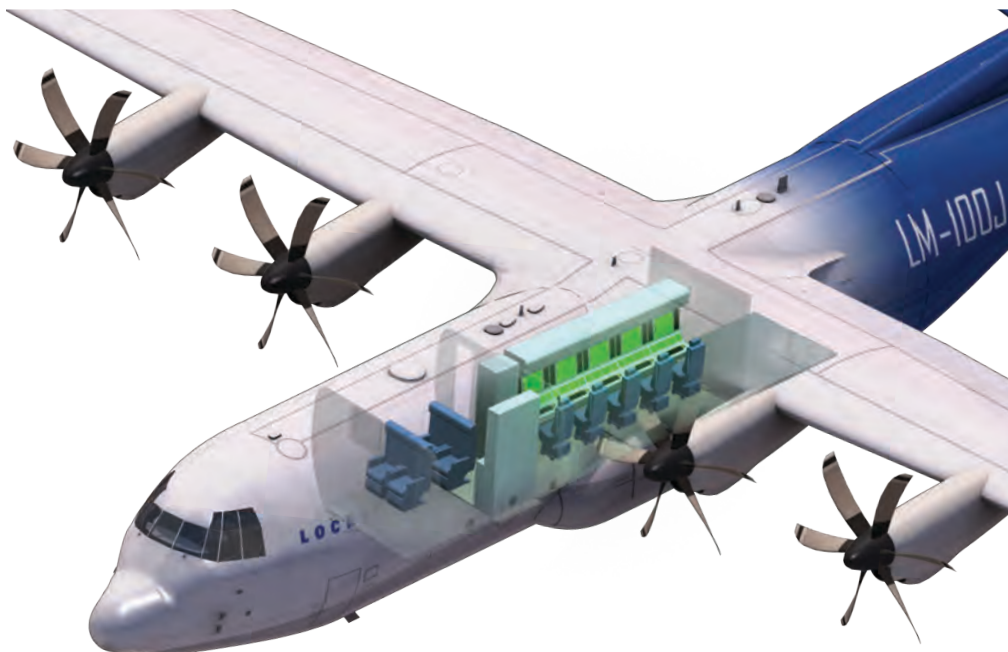
The pallets follow the regulations for carrying passengers while utilizing FAA-certified equipment for seats, lavatory equipment and galley equipment.



SEARCH AND RESCUE ROLL-ON/ROLL-OFF (RO/RO)

RO/RO Capability provides rapid response as a Search and Rescue (SAR) asset.

- Palletized mission system and a reconfigurable sensor pod install without any structural modifications to the existing airframe
- Open system architecture enables adding additional pod sensors enhancing capability and meeting future needs
- Each mission pallet accommodates up to six operator consoles with an optional enclosed operator module accommodates up to five operators



ONE AIRCRAFT, MANY CAPABILITIES



AERIAL REFUELING

* Future capability

- Improved hose reel vs. legacy tankers
- New rapid ground refueling port and new pod fuel pump for increased fuel flow

Supply Fuel—Hose and Drogue

- Fixed wing aircraft with a high-speed drogue
- Tilt-rotor aircraft with a high- or medium-speed drogue
- Helicopters with a low-speed drogue



FIREFIGHTING

Modular firefighting systems installed in the Hercules can drop thousands of gallons of fire retardant or water in just seconds. LM-100J crews are able to fly over rugged mountainous terrain at low speeds to zoom in on targeted hot spots and drop fire retardant to assist firefighters below.



AIR DROP

In an aerial delivery role, the LM-100J can airdrop loads of up to 48,000 lbs (21,772 kg) or use its high-flotation landing gear to land and deliver cargo on rough, dirt strips.

Types of airdrops: Low- and high-velocity and personnel (static line and free fall)

Methods of airdrops: Extraction, gravity and door bundle



ARCTIC SUPPORT

The LM-100J travels as far south as Antarctica and as far north as the Greenland ice cap. Equipped with Teflon™-coated skis, the aircraft effortlessly lands on the cold terrain, making the Hercules the largest ski aircraft in the world.



MEDEVAC

Airborne Emergency Room

- Wounded cared for by medical teams
- Space for up to 97 litters with attendants

Roll-on/roll-off modular and palletized medical pallets facilitate quick change passengers/patients from ground to aircraft and back to ground.



VIP SUPPORT

VIP transport systems provide the LM-100J with the capability to transport high-level personnel via a RO/RO modular or palletized system. The modular systems provide a controlled, self-contained unit for safe and comfortable transport utilizing custom interiors, controlled acoustic levels, environmental control areas, galleys, lavatories, desk or work station areas and communication areas. The palletized systems provide flexible transport utilizing passenger seats, galleys, lavatories and storage closets.



CARGO DELIVERY

Aft Ramp and Door

- Standard palletized and oversize cargo
- Utility helicopters and armored vehicles

Rapidly Reconfigurable to Accommodate

- Palletized equipment
- Floor-loaded material
- Airdrop platforms
- Container Delivery System (CDS) bundles
- Vehicles, personnel, and fuel blivets



AERIAL SPRAY

Aerial spray systems provide the LM-100J with the capability to aerially apply insecticides, herbicides, pesticides, decontamination agents and chemical dispersants for oil spills. Systems available are self-contained RO/RO systems with minimal permanent modification of the aircraft.



HUMANITARIAN

The Hercules can touch down in austere landing zones often before any other transport to provide humanitarian relief after natural disasters. As just one example, in 2017, an integrated fleet of legacy C-130s, L-100s, C-130Js and LM-100Js played a major role in the Puerto Rican humanitarian and disaster relief efforts after Hurricane Maria, as military and commercial crews delivered vital supplies to communities impacted by this devastating storm.



FORCE MULTIPLIER

Lockheed Martin is working on a capability that will be a humanitarian force multiplier by allowing autonomous operations into austere locations. Currently in development is the Aerial Reconfigurable Embedded System (ARES). ARES' vertical takeoff and landing (VTOL) flight module could adapt to multiple missions with interchangeable payloads, offering new capabilities and enabling new operational concepts.

WE'RE ENGINEERING A BETTER TOMORROW

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