

The Pocket Guide to

**A400M**

**The Versatile Airlifter**



 **AIRBUS** MILITARY



**AIRBUS** MILITARY  
SETTING NEW AIRLIFT STANDARDS

# THE NEW GENERATION MILITARY AIRLIFTER

In a rapidly changing world, there is no telling where the next **military threat, peace-keeping need** or urgent request for **humanitarian aid** may arise.

**Air mobility** is vital in achieving the objective of getting people, equipment and supplies to any trouble spot rapidly and efficiently.

Aircraft types currently fulfilling the military tactical transport role in the world's air forces are becoming **obsolete**. Unable to carry much of today's heavy military equipment, they do not meet the needs of modern rapid reaction forces.

The A400M is a larger, more modern, more flexible aircraft specifically designed for today's requirements and those of the future.

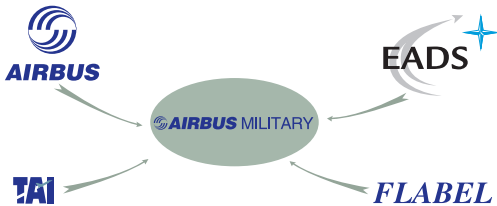
This aircraft can travel **further** and **faster** with a **larger payload**. It is a multi-role transport, which is **more economical** to operate, and which exploits the benefits of state-of-the-art technology.

The A400M is the **only aircraft** that **fully meets** the **European Staff Requirement (ESR)** for a new-generation military transport aircraft.



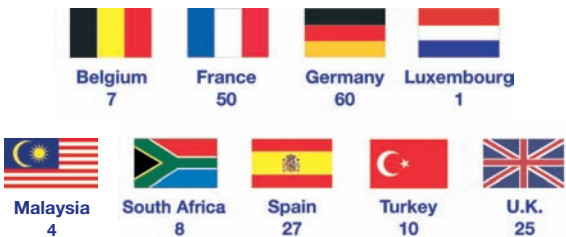
# A PARTNERSHIP WITHOUT PRECEDENT

Airbus Military brings together the resources of Europe's major aircraft manufacturers in the service of the world's air forces. Drawing on the experience gained by Airbus in the civil marketplace, Airbus Military is responsible for managing the A400M programme and providing the focal point for customer contact.



The A400M was conceived to meet the harmonised requirements of the armed forces of Europe as specified in the European Staff Requirement. However, since the requirements for all countries engaged in airlift operations are similar, the A400M is ideally suited to replace the aging fleets of military transport aircraft around the world.

Belgium, France, Germany, Luxembourg, Malaysia, South Africa, Spain, Turkey and the United Kingdom form the customer base for the A400M with a total commitment for 192 aircraft.



The A400M programme builds on the considerable experience accumulated in Europe, not only of Airbus and ATR, but also of C-160 Transall, C212, CN235, and C295 programmes, together with combat aircraft and helicopters.



Airbus  
Family

The A400M is designed and manufactured, and will be supported in service by the Airbus system, which to date has delivered more than 5000 aircraft to 300 customers worldwide. Able to offer a comprehensive family of airliners from 100 to over 555 seat capacities, Airbus is now considered by the world's airlines as an essential candidate in all equipment decisions.

**To meet effectively today's and future airlift requirements, the A400M will provide the following operational characteristics:**

## **Tactical Airlift**

The most demanding mission, requiring a wide scope of capabilities.

- Low level operations
- Autonomous loading and turn-around
- Ability to use short/soft unprepared airstrips
- Reversing capability: 2% gradient
- Steep descent and climb out capability for tactical arrivals and departures
- Air delivery of troops and cargo



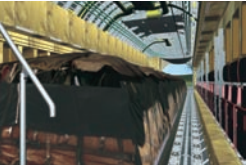
## **Strategic Airlift**

The A400M is ideally suited to transport outside cargo.

- High cruise speed / long range capability
- Voluminous cargo hold
- Side-by-side loading capability
- Loading in bulk or on 463L palets
- Capable of carrying heavy equipment
- Medical evacuation: up to 66 stretchers

# PRINCIPAL DESIGN FEATURES

**The required operational characteristics of the A400M resulted in highly advanced design features.**



## Large Cargo Box

- Sized to match modern, heavy vehicles and equipment used both in military and humanitarian operations
- Equipped with an autonomous cargo handling system

## Advanced Flight Control System

- Glass cockpit with sidestick controls and head-up displays
- Fly-by-wire flight control system
- Provides flight envelope protection

## High Speed Turboprop Engines

- Long range cruise speed of Mach 0.68 up to 37 000 ft
- Allow operation in civil air traffic control environment
- Reduced Life Cycle Costs and lower fuel consumption compared to turbofans

## Advanced Maintenance Systems

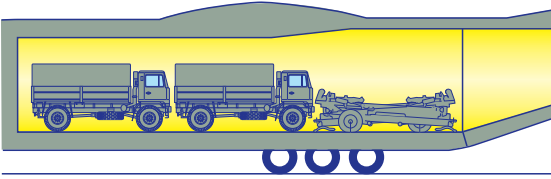
- Built-in supportability through modern diagnostics systems
- Designed for high degree of tolerance to structural damage and ease of repair

## Advanced aerodynamic and structural design

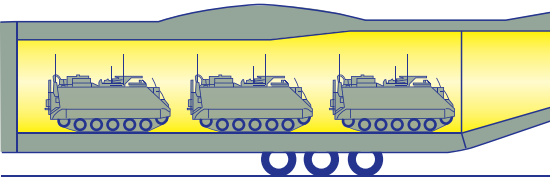
- Conceived for austere operating conditions
- Extensive use of composites and aluminium alloys
- Excellent handling and low speed performance



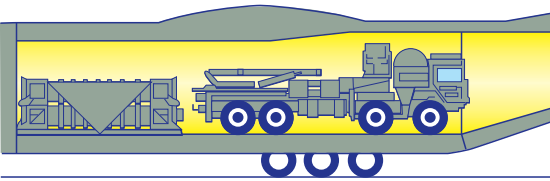
# CARGO HOLD CAPACITY - MILITARY



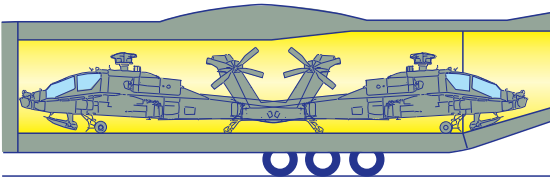
Two 5-tonne trucks and two 105 mm guns



Three M113 armoured personnel carriers

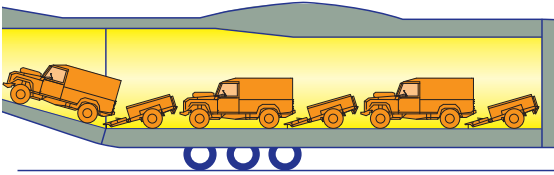


Patriot missile system element

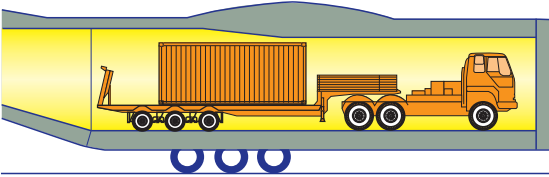


Two attack helicopters

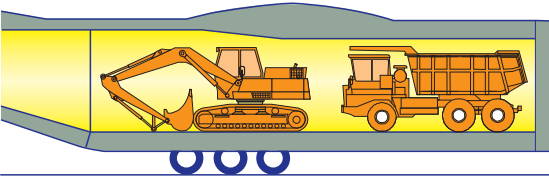
# CARGO HOLD CAPACITY - HUMANITARIAN



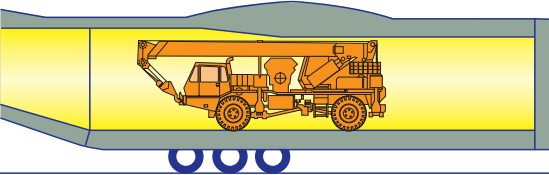
Six Land Rovers and trailers (side by side)



Truck + 25t semi-trailer



Excavator and dump truck



Mobile crane

# DIMENSIONS

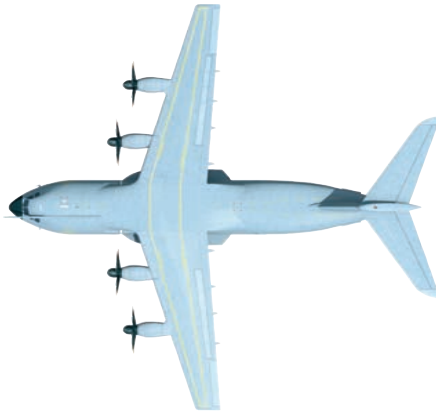


Wheelbase:  
13.6 m



Track: 6.2 m

Height:  
14.7 m



Length: 45.1 m

Span:  
42.4 m



4.00 m

3.85 m



Flat floor

17.71 m

Ramp

5.40 m

# SPECIFICATIONS

Max. Logistic T.O. Weight	(2.25 g)	141 000 kg	(310 851 lb)
Max. Tactical T.O. Weight	(2.5 g)	130 000 kg	(286 600 lb)
Max. Logistic LDG Weight	(2.25 g)	122 000 kg	(268 963 lb)
Max. Tactical LDG Weight	(2.5 g)	115 000 kg	(253 530 lb)
Max. Logistic Payload	(2.25 g)	37 000 kg	(81 571 lb)
Max. Tactical Payload	(2.5 g)	30 000 kg	(66 139 lb)
Internal Fuel Weight		50 500 kg	(111 330 lb)
Operating Weight Empty		78 600 kg	(173 283 lb)

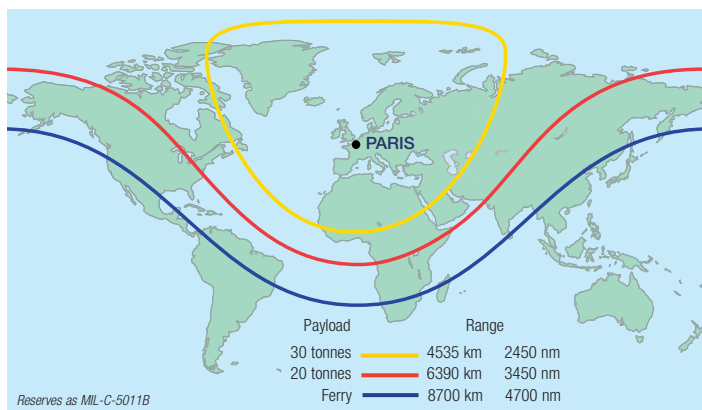
Total Cargo Floor Area	(incl. ramp)	92 m <sup>2</sup>	(990 ft <sup>2</sup> )
Gross Cargo Hold Volume	(incl. ramp)	340 m <sup>3</sup>	(12 007 ft <sup>3</sup> )

Flight Crew 2 pilots, 1 loadmaster

Engine 4 x TP400-D6 (EuroProp Int'l)  
11 000 shp class each

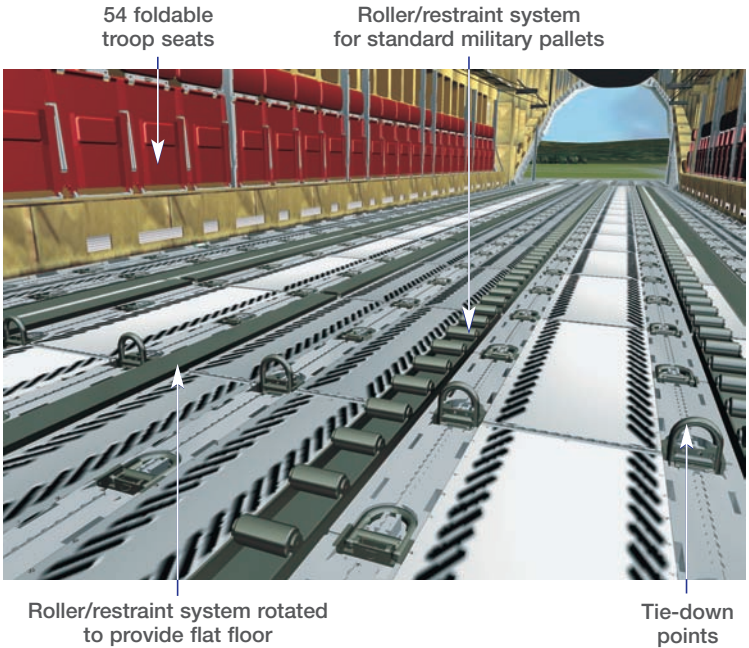
Propeller 4 x FH386 (Ratier-Figeac)  
8 composite blades

Max. Operating Altitude - Normal Ops	11 278 m	(37 000 ft)
Max. Operating Altitude - Special Ops	12 192 m	(40 000 ft)
Max. Cruise Speed (CAS)	555 km/h	(300 kt)
Max. Cruise Speed (TAS)	780 km/h	(422 kt)
Cruise Speed Range (Mach)	0.68 - 0.72 Mach	



Range capability from Paris

# CARGO HANDLING SYSTEM



- Cargo handling system elements retract to provide flat floor.
- Underfloor heavy-duty cargo winch.
- Kneeling undercarriage facilitates loading.
- Rear fuselage clearance allows cross-loading from various truck bed heights.
- Integral 5-tonne crane permits autonomous loading of pallets and bulk loads (optional).
- Removable roller/restraint system for standard civil containers is available as an option.
- Up to 116 paratroops can be accommodated with the addition of two fully removable rows of centreline seats.

## AUTONOMOUS OPERATION

As a tactical transport, A400M will be expected to operate autonomously away from its Main Operating Base for extended periods of time. For short deployments the A400M is designed to achieve a 15-day Maintenance-Free Operating Period. For longer deployments of up to 150 days the A400M carries an austere deployment kit of ground equipment, spares and tools for corrective maintenance.



The A400M's ramp is equipped with three hydraulically powered toes, to assist with the loading/unloading of vehicles. They provide a useful extension to the ramp, when the aircraft is being loaded from trucks positioned crosswise to the aircraft (cross-loading). Three removable roller trays are installed on the ramp toes to assist the palletised loading.

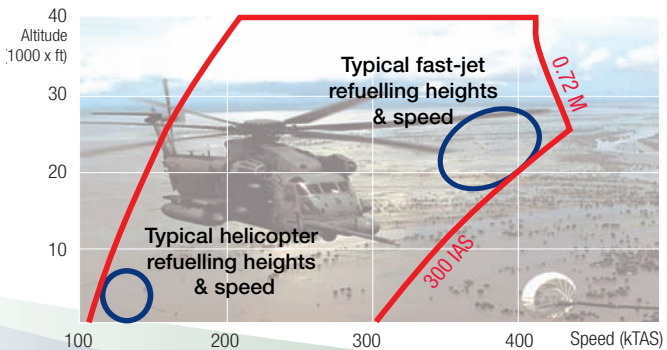


# AIR-TO-AIR REFUELLING CAPABILITY

The flight envelope of the A400M allows it to refuel a wide range of aircraft and helicopters, at the altitudes appropriate to their missions.



- A two-point trailing drogue system can be installed within two hours by fitting two standard air-to-air refuelling pods to the multi-purpose attachment points on the wings.
- An optional centre-line pallet-mounted hose and drum unit can be fitted in the rear cargo bay.
- Optional roll-on/roll-off cargo hold tanks can also be installed, providing up to 12 tonnes of extra fuel capacity.

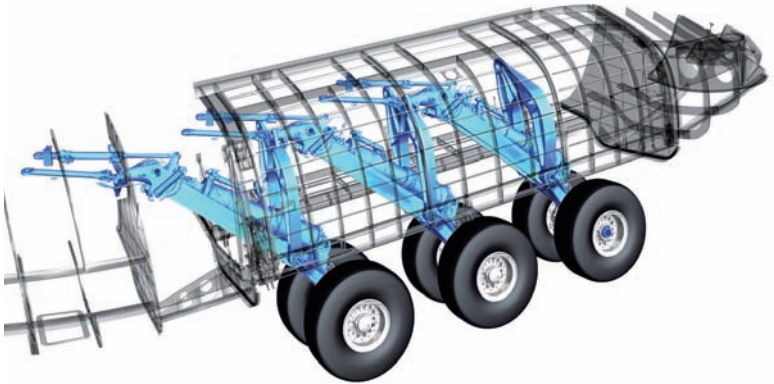


The A400M is easily role-convertible to refuel the entire range of military aircraft from helicopters to fighters

## SOFT FIELD CAPABILITY

The tandem multi-wheel main landing gear provides excellent soft field capabilities, thus allowing the A400M to operate from austere, semi-prepared runways.

Three independent lever type struts per landing gear provide a smooth ride over bumps in rugged terrain and evenly distribute ground loads into the fuselage structure.

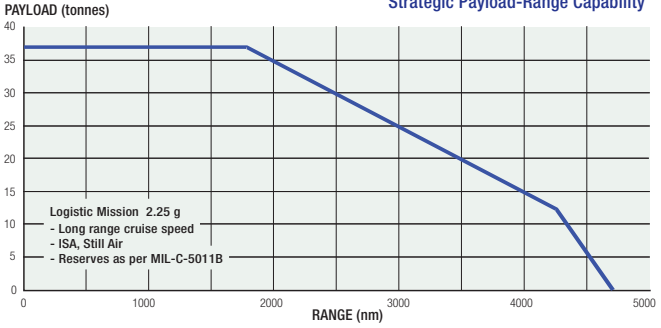


Hydraulic chambers (in addition to the shock absorbers) are included as part of the main landing gear and are filled as appropriate to raise and lower the rear fuselage to ease cargo loading/unloading operations.

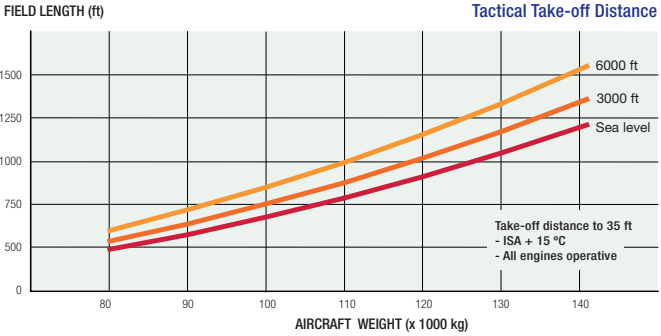
The A400M can perform repeated operations out of semi-prepared fields with CBR 6 (California Bearing Ratio, a conventional measure of the load bearing capability of a natural surface).

# RANGE AND FIELD PERFORMANCE

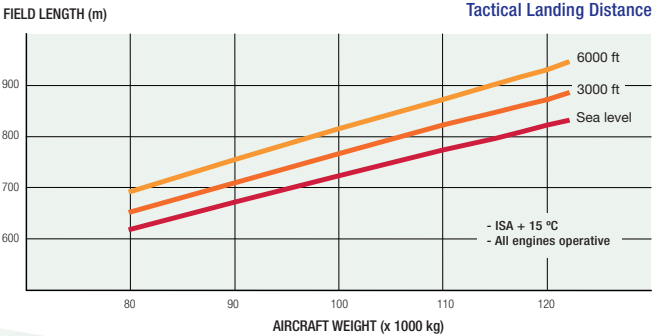
## Strategic Payload-Range Capability



## Tactical Take-off Distance



## Tactical Landing Distance



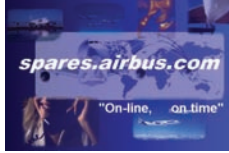
**Airbus Military offers the same high quality Integrated Logistic Support (ILS) services to military customers that is expected by the world's commercial airlines in:**

Customer Support



Engineering & Technical Support Services

Aircraft Maintenance Engineering



Material Support

Flight & Maintenance Training



Technical Data & Information

In addition, individual maintenance support packages for all maintenance events can be offered in Fleet Service Arrangements (FSA) to optimise aircraft availability and to minimise life cycle costs.

A network of MRO (Maintenance, Repair & Overhaul) facilities, JAR-145 approved and experienced civil or military maintenance facilities can be made available around the world.



**Airbus Military** as the prime contractor for A400M is responsible for managing all ILS services and is the **focal point** for all A400M customers.



### Compared to the tactical transports that it will replace, A400M provides:

- **More payload and volume** - to accommodate all major military and civilian cargo combinations.
- **Higher cruise speed** - for more sorties per day with reduced troop and aircrew fatigue.
- **Longer range** - for strategic deployment capability and increased operational flexibility.
- **All weather day and night operation** - for more sorties and greater operational dependability.
- **In-flight refuelling system as standard** - for increased trans-continental and trans-oceanic reach.
- **Advanced airframe design** - for reduced life cycle costs.
- **Proven advanced technology** - for greater reliability and ease of maintenance.

# **A400M**

## The Loadmaster



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They are based on the assumptions shown and are expressed in good faith.  
Where the supporting grounds for these statements are not shown, Airbus Military S.L.  
will be pleased to explain the basis thereof.

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