



CARGO AIRCRAFT GUIDE



Volga  Dnepr

 AIRBRIDGECARGO

 ATRAN



WE WORK WITH WORLD LEADERS

For over 30 years, Volga-Dnepr Group's unique aircraft fleet has been advancing the world of air cargo logistics, enabling our global customers to achieve fast, secure and cost-efficient transportation solutions, even for their most complex logistics challenges.

Volga-Dnepr Group started with Volga-Dnepr Airlines in 1990 when its first An-124-100 departed on its inaugural charter flight. Since then, with **more than three decades of successful operations**, Volga-Dnepr gradually evolved into the Volga-Dnepr Group. Consisting of three international air cargo carriers, the Group provides its customers with **reliable and cost-efficient solutions for even the most complex cargo projects**, supporting various industries including Aerospace, Oil and Gas, Automotive, Energy and beyond.





OUR GROUP

Volga-Dnepr unities **around 4,000 cargo professionals across the globe** who work under various aspects of cargo transportation to **guarantee a seamless customer experience for you.**

TODAY, Volga-Dnepr offers:

CARGO CHARTER OPERATIONS

delivered by three cargo carriers within the Group (Volga-Dnepr Airlines, AirBridgeCargo Airlines, ATRAN Airlines) onboard ramp An-124-100/150, IL-76TD-90VD, Boeing 400ERF/8F, B777F and Boeing 737-400SF/800BCF.

SCHEDULED CARGO OPERATIONS

delivered by AirBridgeCargo Airlines and ATRAN Airlines onboard Boeing 747, 777 and Boeing 737 freighters between Russia, Asia, the Middle East, Europe and North America. The combined network of both carriers covers more than 40 destinations worldwide, with all flights operated into international cargo hubs offering fast, efficient and secure handling of any type of cargo.

SUPPORTING SERVICES

in the field of

- MRO
- logistics services
- training
- insurance
- trucking

10

AN-124-100

2

AN-124-150

5

IL-76TD-90VD

17

Boeing 747F

1

Boeing 777F

5

Boeing 737F

✈️ AIRCRAFT SPECIFICATION

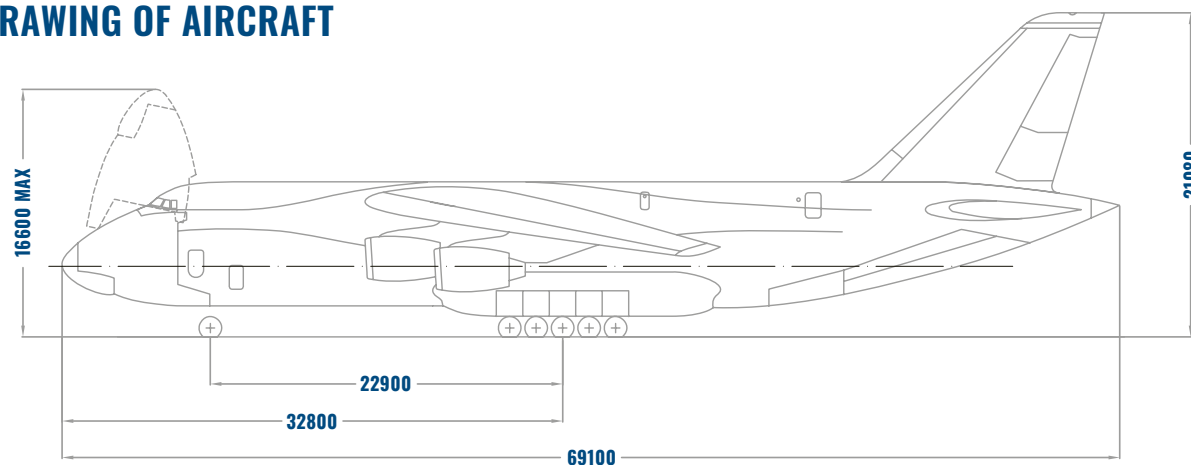
AN-124-100/150

The An-124-100 is the **world's largest, mass produced, civil cargo aircraft** and is a recognized leader of the air cargo industry for its ability to transport oversized and super-heavy shipments.

The combination of exceptional characteristics such as its cargo compartment size, flight range and uplift capability (without the need for special loading equipment) allows the **An-124** to carry super-heavy and oversized **cargoes including equipment up to 120 tonnes** (An-124-100) and **up to 150 tonnes** (An-124-150).

	AN-124-100	AN-124-150
ENGINE TYPE	4x Lotarev D-18 T	4x Lotarev D-18 T
ENGINE TAKE-OFF THRUST	4x 24 T Σ = 96 T	4x 24 T Σ = 96 T
MAXIMUM TAKE-OFF WEIGHT	392,000 kg	402,000 kg
OPERATING EMPTY WEIGHT	192,215 kg	192,559 kg
MAXIMUM PAYLOAD INCL. EQUIPMENT WEIGHT	120,000 kg	150,000 kg
MAXIMUM LANDING WEIGHT	330,000 kg	360,000 kg
MAXIMUM ZERO FUEL WEIGHT	306,000 kg	335,000 kg
CRUISING SPEED	750 km/h	750 km/h
CRUISING ALTITUDE	31,000 – 35,000 ft	31,000 – 35,000 ft
RANGE	4,500 km	4,500 km
MAXIMUM SINGLE LIFT WITH INTERNAL CRANES	20,000 kg	20,000 kg
ENGINEERING CREW	7 crew members	7 crew members
FLIGHT CREW	6 crew members	6 crew members

DRAWING OF AIRCRAFT



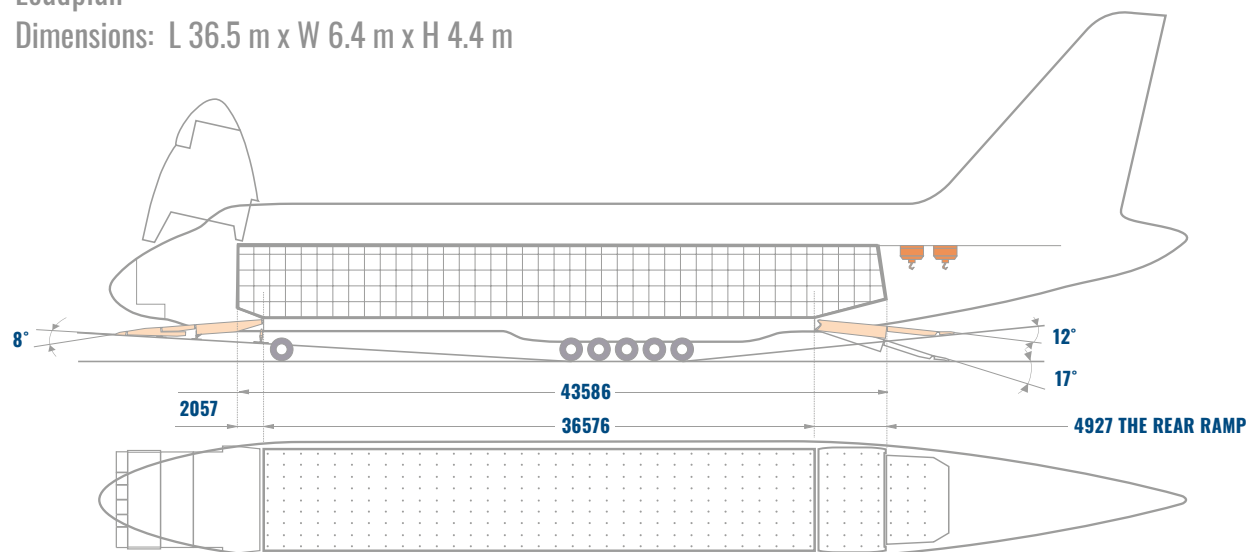
✈️ AIRCRAFT SPECIFICATION

AN-124-100/150

CARGO CAPABILITIES

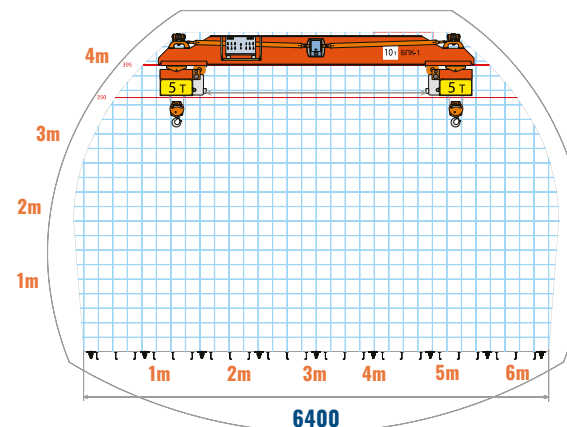
Loadplan

Dimensions: L 36.5 m x W 6.4 m x H 4.4 m



CROSS SECTION

Frame No. 20



PAYLOAD INCL. EQUIPMENT WEIGHT

**120,000/
150,000 kg**

RANGE

**4,500/
2,300 km**

LOADING METHODS

- Pallets & crates loaded by forklift
- Use of the internal crane system
- Vehicles driven or winched into the aircraft
- Vehicles loaded on the Car Rack System
- Heavy or outsized items winched into the aircraft using the tracking system

ENVIRONMENT IN THE CARGO CABIN

G-Factors

- Forward ▶ 2.3g
- Backward ▶ 1.5g
- Lateral ▶ 1.5g
- Upward ▶ 2.0g
- Down ▶ 2.5g

The lashing and preparation of cargo for flights must be done in respect of these maximum values.

AIR PRESSURE

- Minimum pressure (unpressurised cargo cabin)
▶ 260 mbar
- Minimum pressure (pressurised cargo cabin)
▶ 480 mbar +0/1/-0.02 kg/cm²
- Air pressure change rate
▶ 70 mbar/min

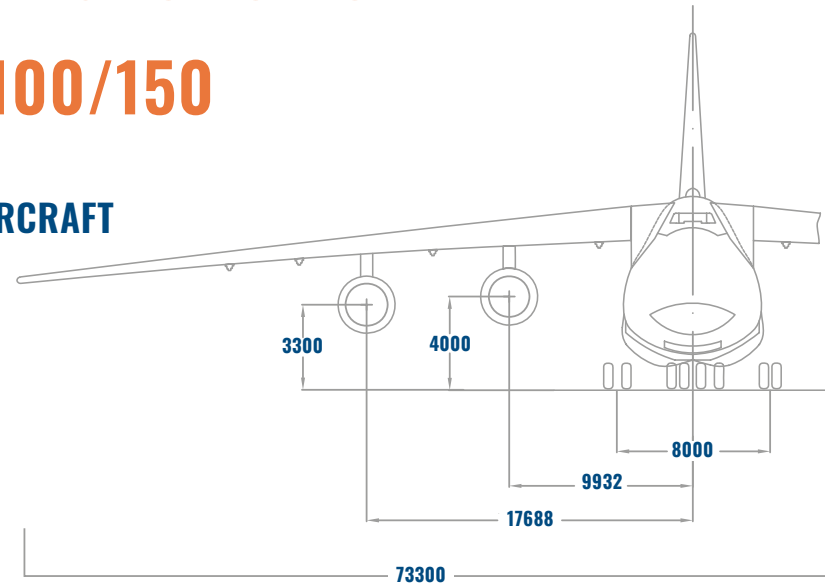
TEMPERATURE RANGE

- Air Temperature
▶ Up till 20° C upon request
- Humidity during flight
▶ 10-15% RH

✈️ AIRCRAFT SPECIFICATION

AN-124-100/150

DRAWING OF AIRCRAFT



LOADING EQUIPMENT

- **Internal Crane System** consists of two gantries each with two lifting hooks. Capable of lifting single items of up to 20,000 kg. The containers must have suitable lifting points. The SPG system can be fitted to increase lifting capacity up to 30,000 kg but has further restrictions relating to the centre of gravity of the container and location of lifting points.
- **Double-deck loading and transport system** designed and patented by Volga-Dnepr allows the An-124-100 to transport up to 35 cars (average sedan) on a single flight; loading does not require any additional equipment; alternatively, cars can be driven or winched through the nose
- **Bearings** for elements of the front aircraft ramp or, to put it simply, under the front ramp of the An-124
- **Extension ramps** of various types of cargo
- **Tracking systems** (similar to railway tracks): **2 versions:** low-profile and standard-profile
- **Skate beams and roller beams**
- **Platforms** of various design and load-carrying capacity
- **Protective weight-distributing plating**

AIRCRAFT SPECIFICATION

IL-76TD-90VD

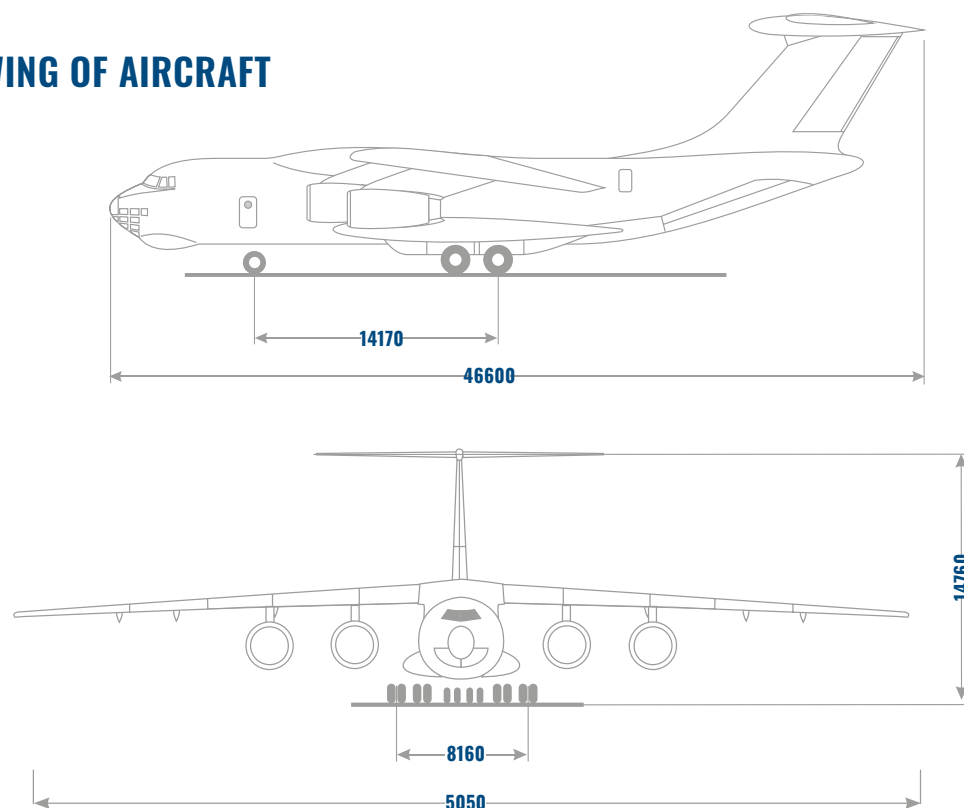
Volga-Dnepr participated in the cross-section modernisation of the IL-76TD, **one of Volga-Dnepr's most successful cargo aircraft** thanks to its cabin size, carrying capacity and autonomous loading capabilities.

The resulting product is the IL-76TD-90VD, equipped with new PC-90A-76 engines and modern avionics, approved for worldwide operations.

IL-76TD-90VD

ENGINE TYPE	4x PS-90A-76
ENGINE TAKE-OFF THRUST	4x 16,000 kg f Σ = 64,000
MAXIMUM TAKE-OFF WEIGHT	195,000 kg
OPERATING EMPTY WEIGHT	97 243 kg
MAXIMUM PAYLOAD INCL. LOADING EQUIPMENT	50,000 kg
MAXIMUM LANDING WEIGHT	155,000 kg
MAXIMUM ZERO FUEL WEIGHT	144,800 kg
CRUISING SPEED	750 km/h
FLIGHT LEVEL (TYPICAL)	9,100 m – 10,600 m
RANGE	4,500 km
CAPABILITY OF ONBOARD CRANE SYSTEM	12,000 kg
ENGINEERING CREW	4 crew members
FLIGHT CREW	4 crew members

DRAWING OF AIRCRAFT





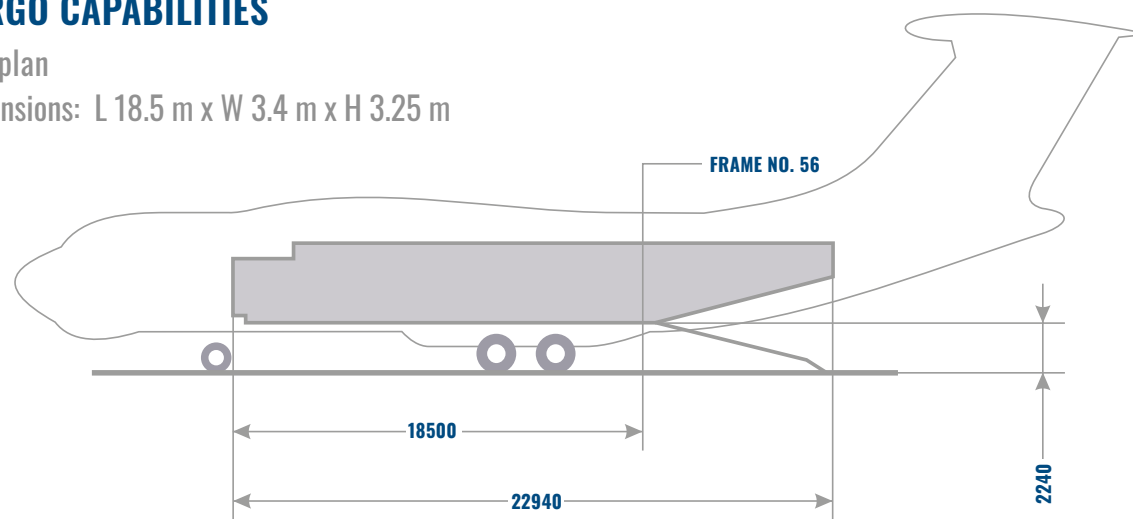
✈️ AIRCRAFT SPECIFICATION

IL-76TD-90VD

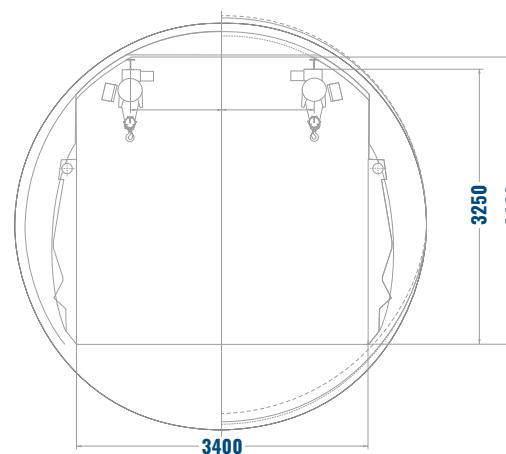
CARGO CAPABILITIES

Loadplan

Dimensions: L 18.5 m x W 3.4 m x H 3.25 m



CROSS SECTION



MAX. LANDING WEIGHT

195,000 kg

PAYLOAD INCL. EQUIPMENT WEIGHT

50,000 kg

RANGE

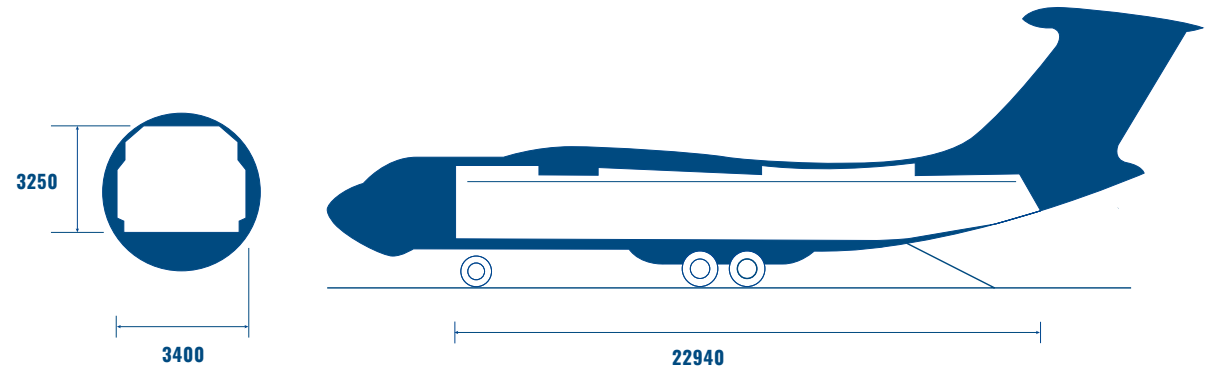
4,500 km

CRUISING SPEED

750 km/h

✈️ AIRCRAFT SPECIFICATION

IL-76TD-90VD



ENVIRONMENT IN THE CARGO CABIN

G-Factors

- Forward ▶ 2.23g
(up to 6.0g in case of emergency landing)
- Backward ▶ 1.5g
- Lateral ▶ 1.5g
- Upward ▶ 2.0g
- Down ▶ 2.5g

The lashing and preparation of cargo for flights must be done in respect of these maximum values.

AIR PRESSURE

- Maximal pressure
▶ 750 mbar (2 500m)
- Air pressure change rate
▶ 15 mbar/min

TEMPERATURE RANGE

- Air Temperature
▶ Up till 25° C upon request
- Humidity during flight
▶ 10-15% RH

LOADING EQUIPMENT

- Internal Crane System – The onboard system of overhead cranes consists of 4 electric hoists with 3-tonne lifting capacity each, they are capable of lifting single items of up to 12,000kgs
- The freighter is equipped with 2 onboard electric winches of 3-tonne hauling capacity each
- Loading of wheeled vehicles, trailers and tracked vehicles
- Ramp enables wheeled vehicles to be loaded using their own power
- Extension ramp can be applied for the loading of long and high vehicles
- Loading of heavy and outsize cargo
- Use of special Volga-Dnepr Airlines' loading equipment for loading of heavy and outsize cargo subject to usage of mobile crane(s) and additional trailers



AIRCRAFT SPECIFICATION

BOEING 747-8F/400ERF

The Boeing 747 is an all-cargo aircraft and is **one of the most popular choices for cargo transportation**. Its unique features such as the large side door and nose door facilitate the ease and flexibility of loading.

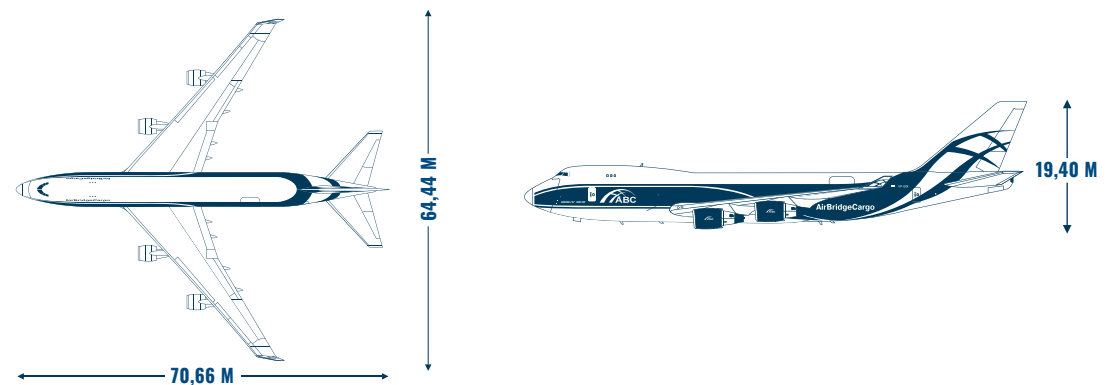
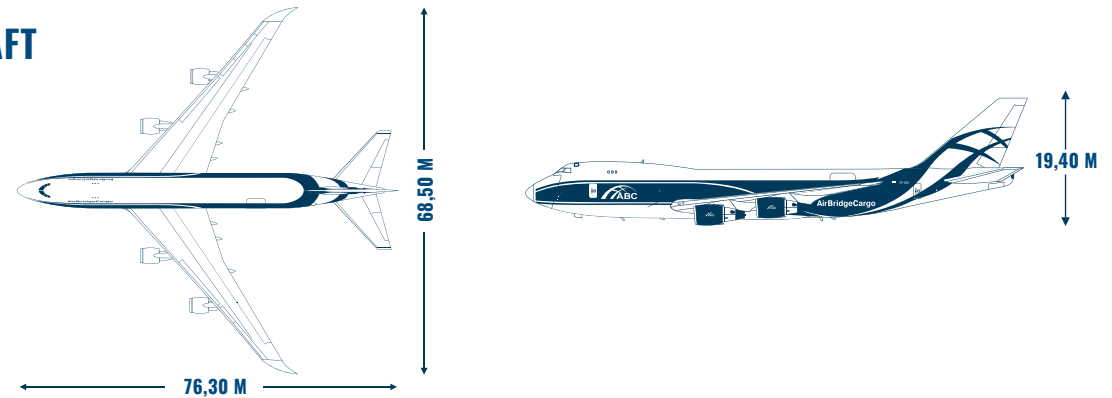
BOEING 747-8F

MAXIMUM TAKE-OFF WEIGHT	447,695 kg/975,000 lb
MAXIMUM LANDING WEIGHT	329,761 kg/761,000 lb
MAXIMUM PAYLOAD INCL. EQUIPMENT	139,000 kg
MAIN DECK VOLUME	692,7 m ³ / 24,462 ft ³
LOWER HOLD VOLUME	150 m ³ / 5,330 ft ³
BULK	14 m ³ / 496 ft ³
ULD MAIN DECK	34 positions

BOEING 747-400ERF

MAXIMUM TAKE-OFF WEIGHT	412,796 kg/910,000 lb
MAXIMUM LANDING WEIGHT	296,195 kg/653,000 lb
MAXIMUM PAYLOAD INCL. EQUIPMENT	128,500 kg
MAIN DECK VOLUME	607,7 m ³ / 21,462 ft ³
LOWER HOLD VOLUME	130,3 m ³ / 4,601 ft ³
BULK	14 m ³ / 520 ft ³
ULD MAIN DECK	30 positions

DRAWING OF AIRCRAFT



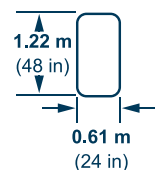
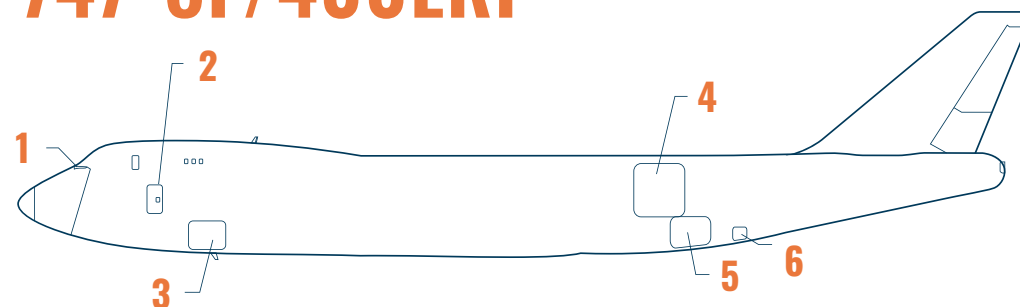
The Boeing 747-8F and 747-400ERF both contain three compartments enabling different temperature settings from 4°C to 29°C.



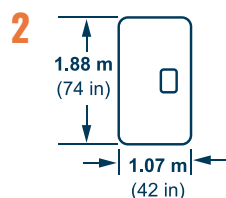
✈️ AIRCRAFT SPECIFICATION

BOEING 747-8F/400ERF

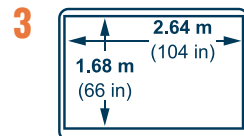
DRAWING OF AIRCRAFT



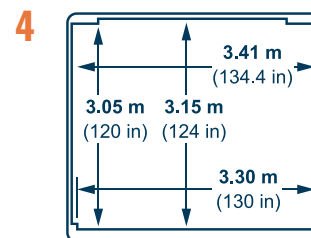
**U/D entry door
(STA 464)
Left-hand side**



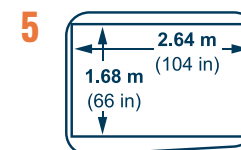
**Fwd crew
service door
(STA 464)
Left-hand side**



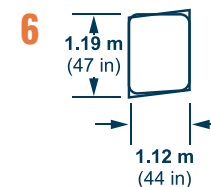
**Fwd lower deck
cargo door
(STA 615)
Right-hand side**



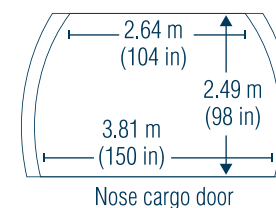
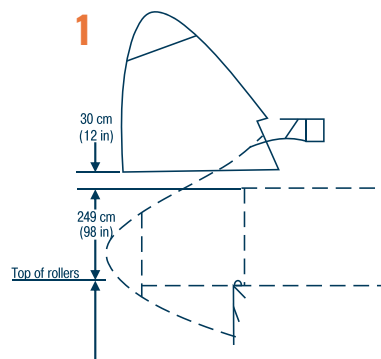
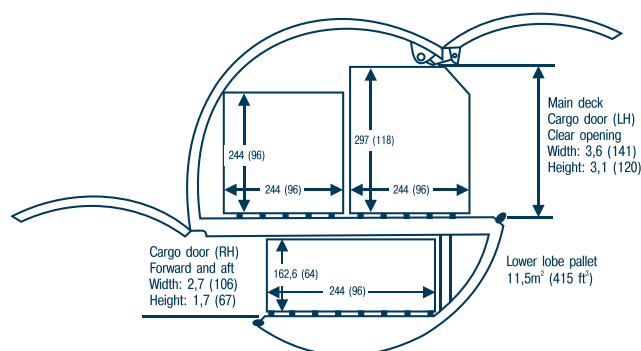
**Main deck
cargo door
(STA 1770)
Left-hand side**



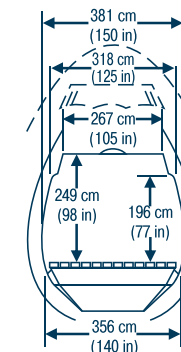
**Aft lower deck
cargo door
(STA 1865)
Right-hand side**



**Bulk cargo door
(STA 2007)
Right-hand side**



Nose cargo door



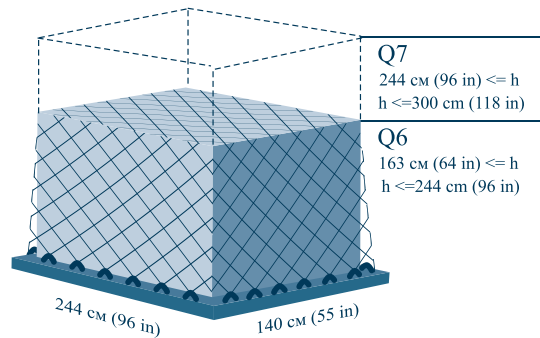


✈️ AIRCRAFT SPECIFICATION

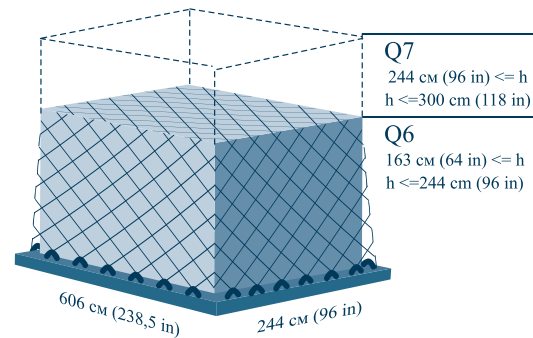
BOEING 747-8F/400ERF

ULDs

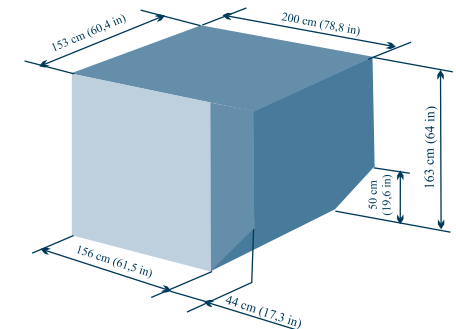
PYB



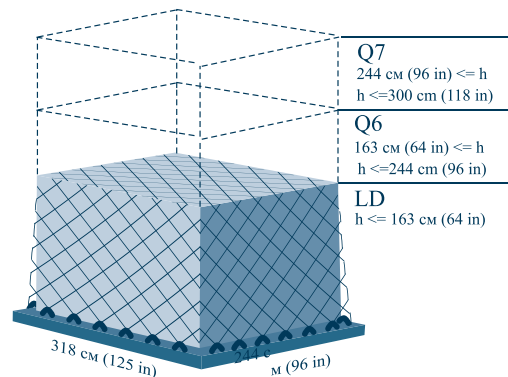
PGA/PGF



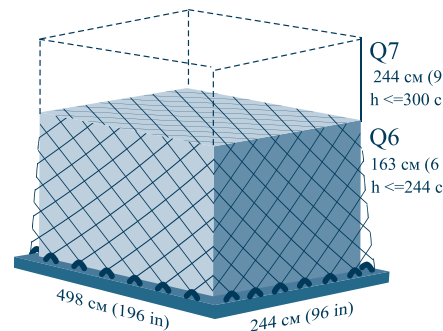
AKE



PMC



PZA



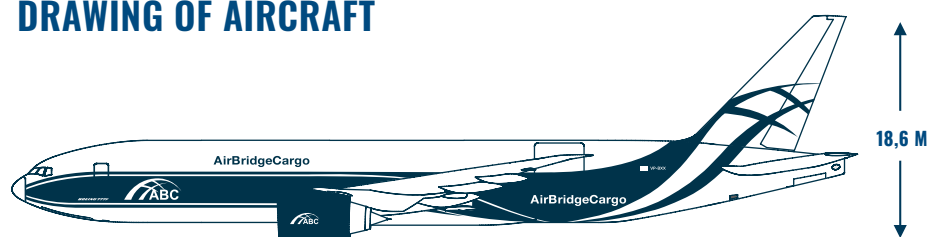


✈️ AIRCRAFT SPECIFICATION

BOEING 777F

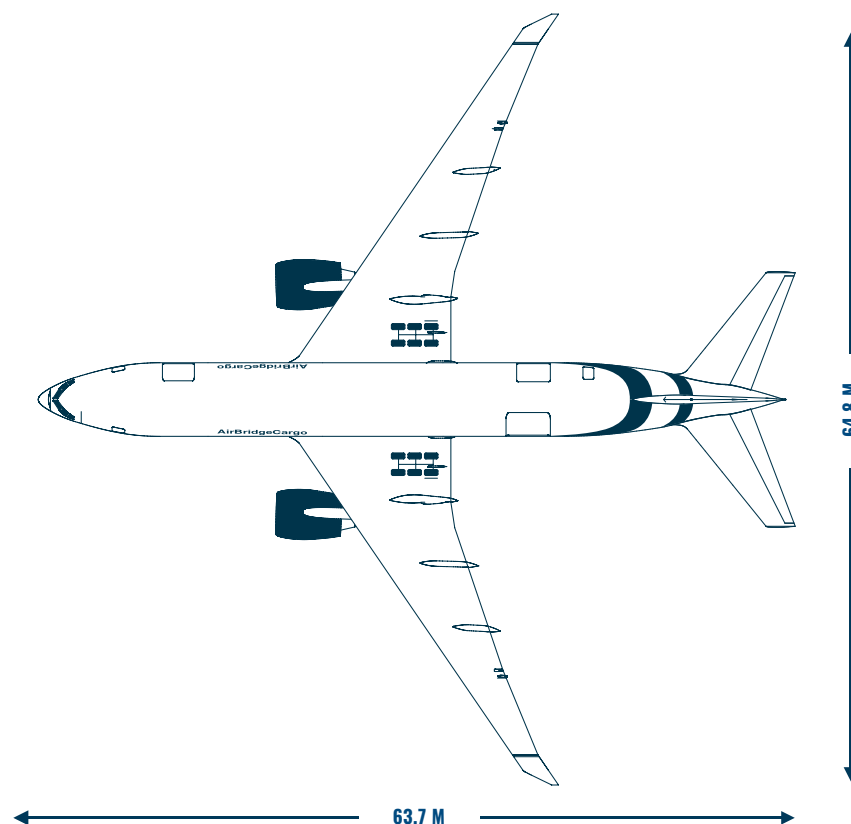
The Boeing 777 is the **world's largest, most capable twin-engine freighter** and offers 102 tonnes of payload. This aircraft as an ideal complement to our B747F family allowing us to provide a more sustainable and efficient service. Advanced technology including a new composite wing, all-new engines and superior aerodynamics will result in enhanced benefits for our customers.

DRAWING OF AIRCRAFT



BOEING 777F

MAXIMUM TAKE-OFF WEIGHT	349,720 kg / 766,800 lb
MAXIMUM PAYLOAD INCL. EQUIPMENT	102,010 kg / 224,900 lb
RANGE	9,200 km / 4,970 nmi
CRUISE SPEED	Mach 0.84
TOTAL CARGO VOLUME	652.7 m ³ / 23,051 ft ³
ULD MAIN DECK	30 positions



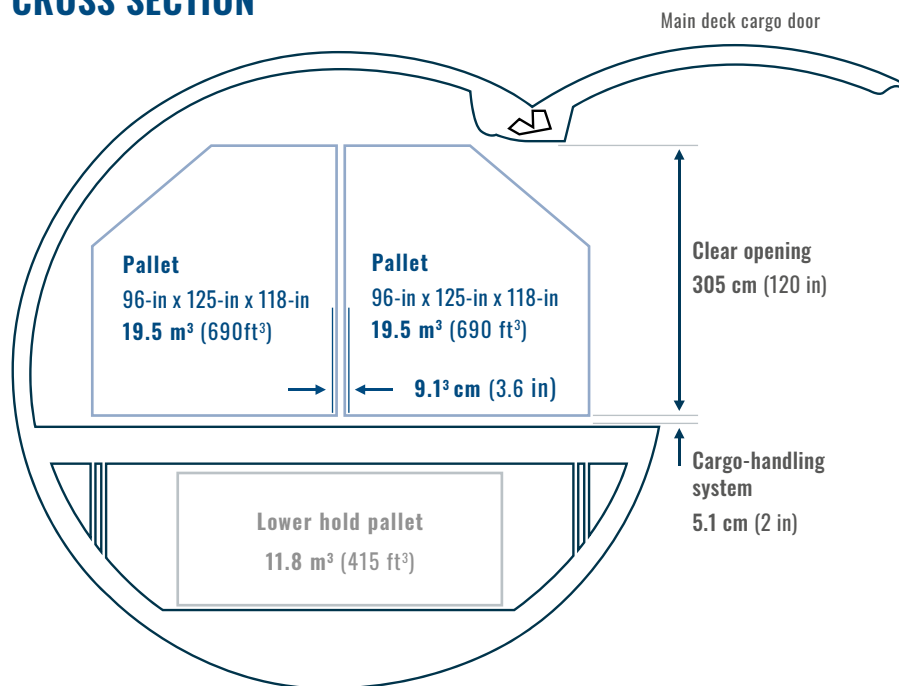


AIRCRAFT SPECIFICATION

BOEING 777F

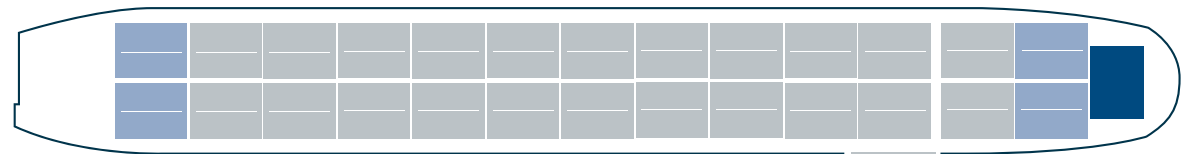
CARGO CAPABILITIES

CROSS SECTION



Main deck

518.2 m³ (18,301 ft³)



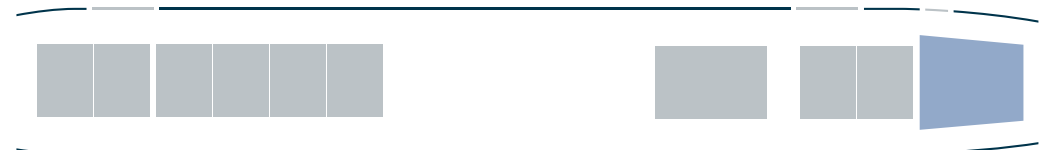
(22) 96-in x 125-in x 10-ft
contoured pallets
19.5 m³ (690 ft³)

(22) 96-in x 125-in x 116-in
contoured pallets
17.8 m³ (627 ft³)

(1) 96-in x 125-in x 8-ft pallet
17.4 m³ (613 ft³)

Forward lower hold

70.5 m³ (2,490 ft³)



(10) 96-in x 125-in x 64-in pallets
11.8 m³ (415 ft³)

Bulk 17.0 m³ (600 ft³)

Aft lower hold

47.0 m³ (1,660 ft³)



✈️ AIRCRAFT SPECIFICATION

BOEING 737

The Boeing 737-400SF/800BCF is a twin-engine medium-haul aircraft that is **perfectly suited to short and mid-range routes.**

It is able to carry up to 20 tons and 130 m³ of cargo to a distance of 2,800 kilometres. The aircraft is equipped with a main deck side cargo door and a loading system enabling it to stow 10 standard 2235×3175 mm aviation pallets and containers in the cargo hold.

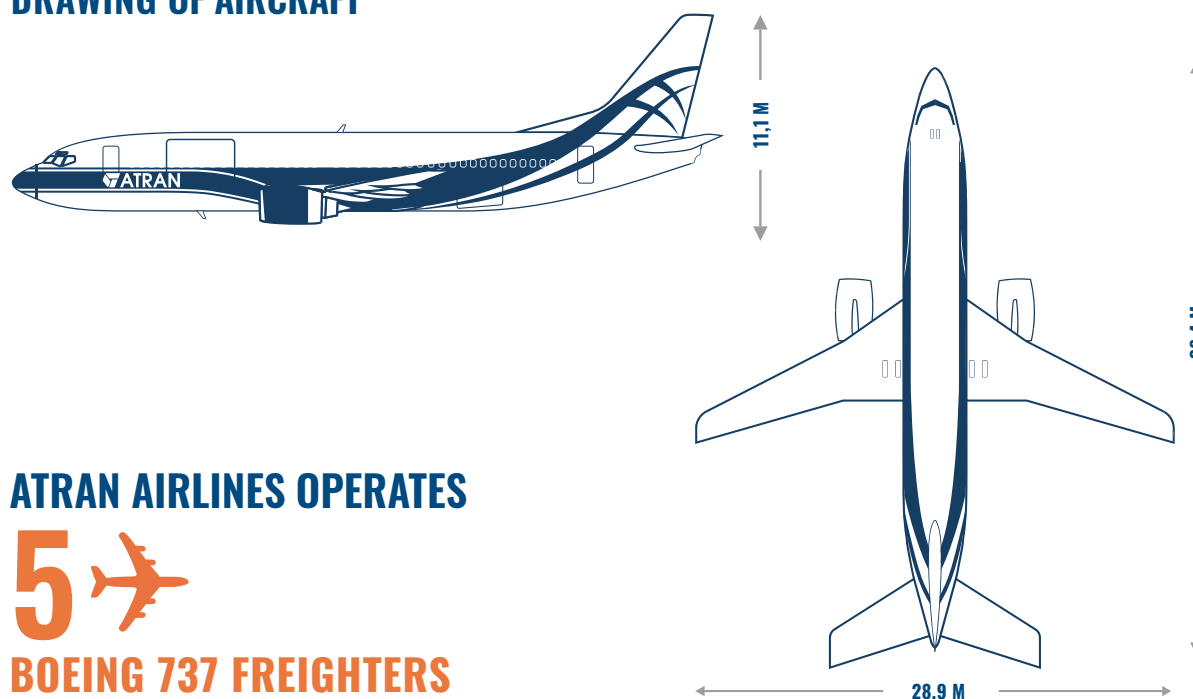
BOEING 737-800BCF

MAXIMUM TAKE-OFF WEIGHT	79,000 kg / 174,200 lb
MAXIMUM LANDING WEIGHT	66,350 kg / 146,300 lb
MAXIMUM PAYLOAD INCL. EQUIPMENT	23,950 kg
MAIN DECK VOLUME	141,5 m ² / 4,997 ft ³
PALLETS AND CONTAINERS WITH BASE 88" X 125", TOTAL NUMBER	11

BOEING 737-400SF

MAXIMUM TAKE-OFF WEIGHT	65,090 kg / 153,500 lb
MAXIMUM LANDING WEIGHT	55,338 kg / 122,000 lb
MAXIMUM PAYLOAD INCL. EQUIPMENT	20,000 kg
MAIN DECK VOLUME	121,5 m ² / 4,289 ft ³
PALLETS AND CONTAINERS WITH BASE 88" X 125", TOTAL NUMBER	10+1

DRAWING OF AIRCRAFT



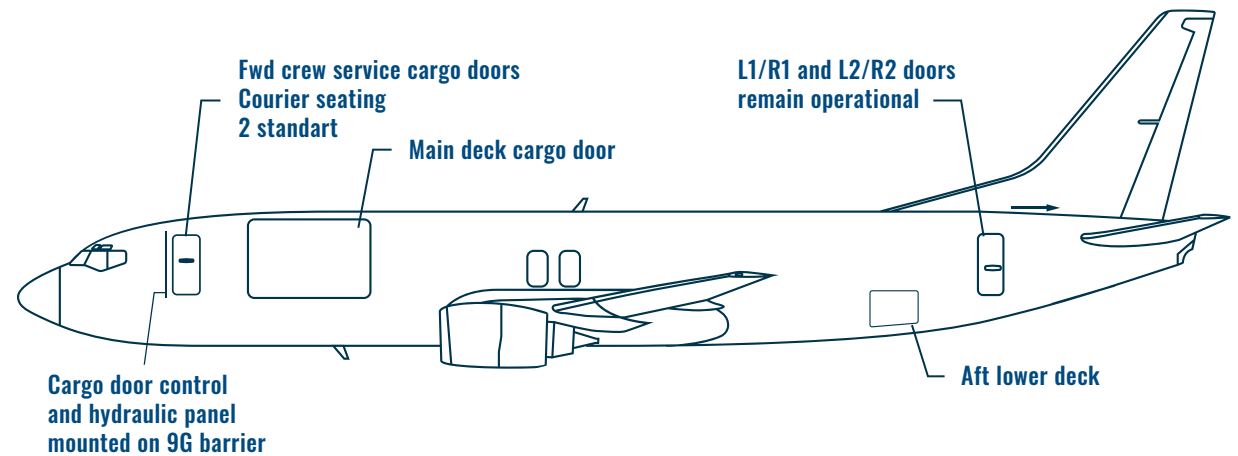
ATRAN AIRLINES OPERATES

5 ✈️
BOEING 737 FREIGHTERS

AIRCRAFT SPECIFICATION

BOEING 737-400SF/800BCF

CARGO CAPABILITIES



CARGO CAPABILITIES

Dimensions

- **Boeing 737-400SF**
 - Length 36.4 m / 119 ft
 - Height 11.07 m / 36 ft
 - Wing span 28.88 m / 94 ft
- **Boeing 737-800BCF**
 - Length 39.5 m / 128 ft
 - Height 12.54 m / 39.4 ft
 - Wing span 35.8 m / 114.8 ft

MAX. TAKE OFF WEIGHT

65,090 kg
153,500 lb

MAX. LANDING WEIGHT

55,338 kg
122,000 lb

MAIN DECK VOLUME

121,5 m²
4,289 ft³

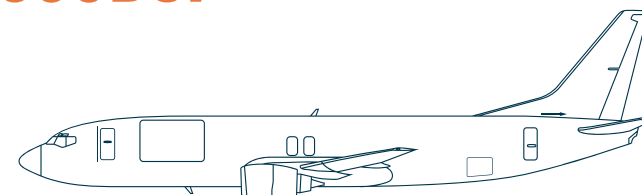
MAX. WEIGHT FOR ONE PIECE OF CARGO

3,200 kg

✈️ AIRCRAFT SPECIFICATION

BOEING 737-400SF/800BCF

CARGO CAPABILITIES

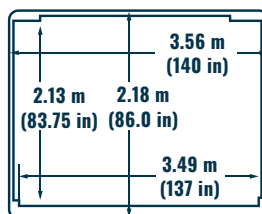


LOADING HEAVY CARGO

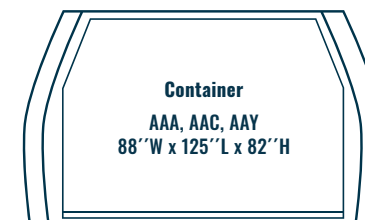
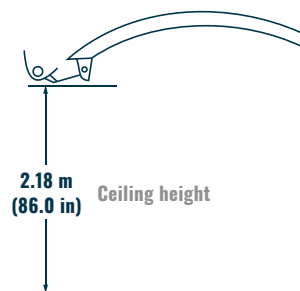
- The maximum weight for one piece of cargo is 3,200kg, on the condition that the dimensions of this piece do not exceed the dimensions of the pallet
- With a new scheme developed by ATRAN Airlines, should the cargo not exceed dimensions of 200 x 140 x 150cm, the weight of the cargo can be up to 6t

LOADING METHODS

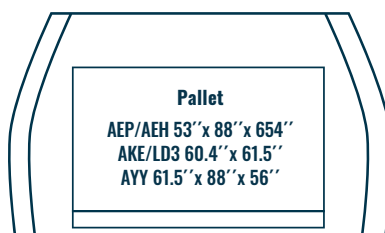
- Loading oversized cargo (Main deck)
- Dimensions up to 380 x 100 x 100cm and must be reinforced on a pallet and loaded by the wide side of the pallets, turning 90 degrees on entrance to the main deck
- Loading cargo at an angle to the door of the main cargo decking



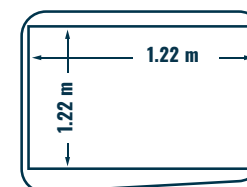
Main deck
cargo deck



Position 1-10



Position 11



Aft lower deck
cargo door

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