

## **ANTONOV AIRCRAFT**

NO OTHER NAM CARRIES MORE WEIGHT

## **INDUSTRIES**







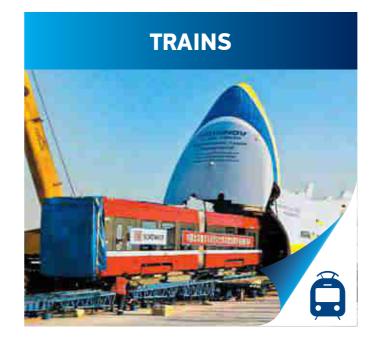




















#### Antonov AN-124-100M-150 vs AN-124-100 - the facts:

- Payload increased up to 150,000kg (330693lbs) through reinforcement of fuselage structure, cargo floor and cargo ramp;
- Weight of single-piece cargo increased to 120,000kg (264555lbs)
   following fuselage structure reinforcement and installation of nose door
   auxiliary supports;
- Compliance with P-RNAV conditions following upgrading of flight and navigation equipment;
- Take-off weight and fuel weight increased enhancing aircraft range;
- Engine noise level reduced following installation of sound-absorbing cowlings;
- Flight range increased;
- Reshaped nose for better fuel efficiency.



	AN-124-100	AN-124-100M-150
Maximum Payload	120,000kg (264,555lbs)	150,000 kg (330,693lbs)
Maximum Volume	1,040 CBM	1,040 CBM
Cargo Cabin LWH	36.5x6.4x4.4m (1437x251.9x173.2in)	36.5x6.4x4.4m (1437x251.9x173.2in)
including Ramp	43.7x6.4x4.4m (1877.9x251.9x173.2in)	43.7x6.4x4.4m (1877.9x251.9x173.2in)
Cargo Door WH	6.4x4.4m (251.9x173.2in)	6.4x4.4m (251.9x173.2in)
On-Board Crane	30,000kg lift (66,139lbs)	30,000kg lift (66,139lbs)

#### AN-124-100M-150 Ruslan В 46930 mm (1847.6") - ON-BOARD CRANES - EXTENT OF TRAVEL FRAME 16 26 48 50 52 54 56 58 63 82 94 96 98 100 102 104 106 108 36 38 64 66 68 70 72 74 76 92 3" FROM FRAME 98 YMIN! 1890 1390 (74.4") (54.7") 3000 (118.1") 2200 (86.6") PRESSURE RAMP 80 GROUND WITH NOSE LG В 'KNEELING' A GROUND WITHOUT 'KNEELING' 96 98 38 56 58 60 63 88 92 94 100 102 104 106 108 75 (2.97) RAMP METRIC GRID (500 mm) -25 ROW 15 ROW 6050 238.2° 6840 6500 OI ROW -1P ROW INCH GRID 2P ROW (20)-3P ROW 1140 (44,9") X 32 = 36480 (1436.2") 1100 1115 1114 1115 (43/3) (43/9) (43/9) (43/9) 8850 LASHING FITTINGS SOCKETS 348.4 3994 mm (157.27) 3786 mm (149.11) 3850 (151.07) MAX 640 (33.17) MIN 556 mm 16-76 B-747 SIDE DOOR 3000 mm HERCULES B-747 NOSE DOOR 4400 mm (17347) E456 mm 1000 mm \_\_\_ 8400 mm (252")

8-8

A.A.



The AN-22A 'Antei' is unrivalled in almost every aspect. It represents one of the key engineering achievements in aviation history.

This huge four-engine turboprop is the world's largest propeller-driven aircraft, holding a series of world records that are likely to remain unsurpassed.

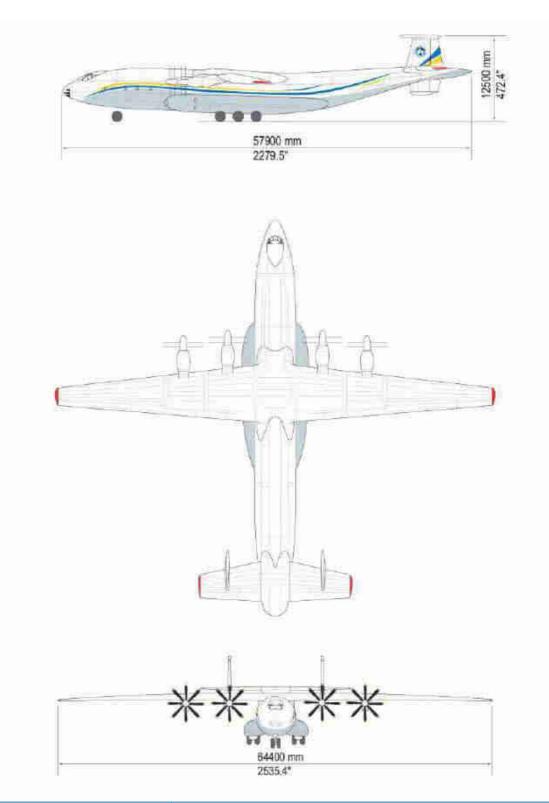
The first prototype AN-22 was rolled out in August 1964. After months of test flying it made its international public debut at the 1965 Paris Air Show at Le Bourget. During its first 50 years of flying, the AN-22 set a total of 41 speed, payload and payload-to-height world records.

Originally built as a military aircraft, the AN-22's cabin height mirrors that of the AN-124 and AN-225 - 4.4m (14ft 5in). Similarly equipped with an on-board crane system, the AN22 is just as practical, yet more economical. Thanks to its unrivalled payload of 60,000kg (132,277lbs), the AN-22 is the only widebody freighter able to undertake the transportation of outsize cargo to remote destinations. The aircraft has the capability to operate to relatively short, unpaved airstrips. Only two airframes have ever seen commercial use. Although the AN-22A currently operated by Antonov Airlines was first built in 1974, after two years and thousands of man-hours of extensive maintenance work, the aircraft

returned to service in September 2016. This later version of the AN-22 is almost totally self-sufficient, requiring little ground support equipment thanks to its four onboard cranes with a combined capacity of 10,000kg (22,046lbs).

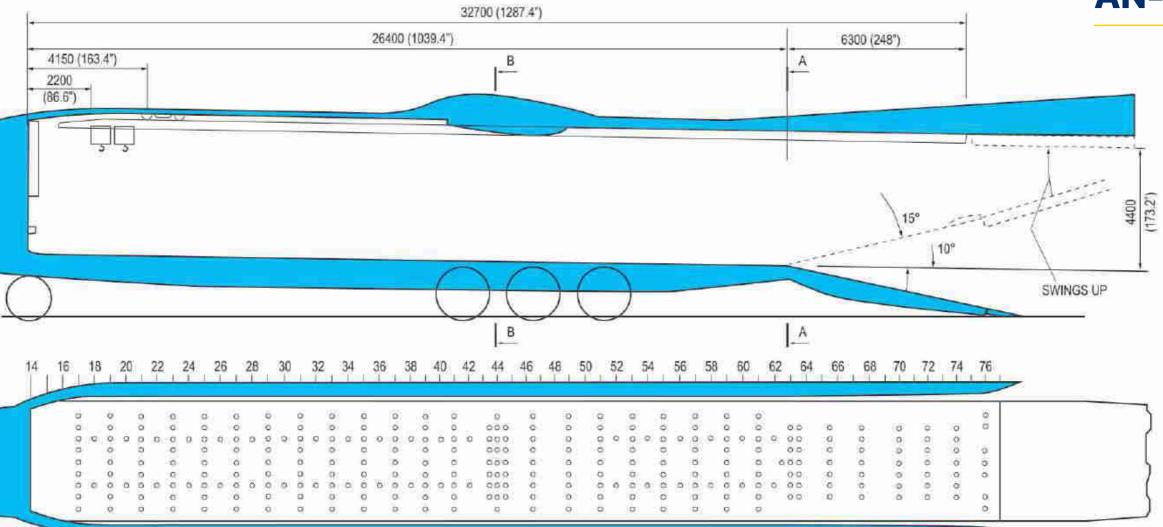
Having proved itself historically, the AN-22A is once again available for global transport duties. This aircraft provides a cost-effective alternative to cargo shipments that have traditionally been flown by jet aircraft such as the IL-76 and B747F. The unique AN-22A, however, remains the only method of air transportation for 60,000kg (132,277lbs) shipments to some of the world's remotest regions.

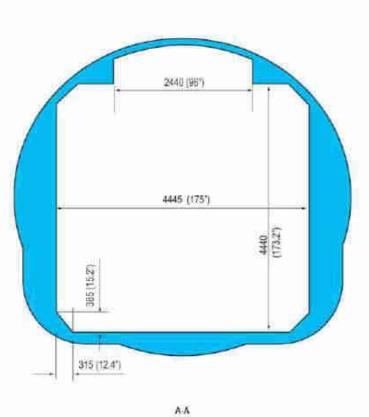


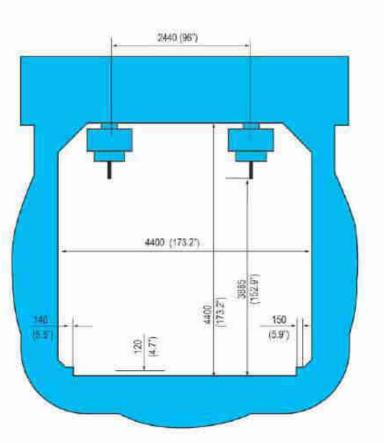


	AN-22 Antei	
Maximum Payload	60,000kg (132,277lbs)	
Maximum Volume	550 CBM	
Cargo Cabin LWH	26.4x4.4x4.4m (1039.37x173.2x173.2in)	
including Ramp	32.7x 6.4 x 4.4m (1287.4x173.2x173.2in)	
Cargo Door WH	6.4x4.4m (251.9x173.2in)	
n-Board Crane 10,000kg lift (22,046lbs)		

## AN-22 Antei

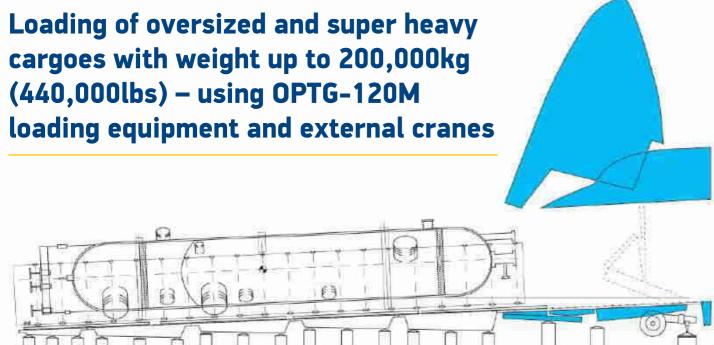






B-B





The **OPTG120** ramp system is the strongest and most rigid ramp system on the market. It has been designed and manufactured by Antonov Airlines to load heavy and oversized pieces.

#### Advantages of the OPTG120 ramp system:

- Lightweight and easily transportable;
- Allows easy inspection during loading process;
- Anchored to the floor after installation;
- Track size is adjustable;
- Lashing/anchoring points on both sides;
- Winching points/joint points available;
- In excess of 17m (55ft 9in) clearance of the external part. Suitable for any type of container. Can be extended if necessary;
- Fully adjustable: can be used simultaneously with standard platforms (0.236m [9.3in] from the aircraft floor) and low platforms (0.141m [5.5in] from the aircraft floor).

The **OPTG120** ramp system is used in the transportation of heavy pieces on the AN-124-100/150M and AN-225 aircraft. It allows the loading and unloading of cargo with a maximum weight of 200,000kg (440,000lbs) (for AN-225) and height of 4.10m (13ft 5in) (both AN-225 and AN-124).













## Loading of tall pieces with height up to 4.27m (168in) – using OPKG-50 loading equipment and external cranes.

The **OPKG-50** ramp system is a unique, low profile skate-type loading equipment intended for loading and offloading oversized cargo weighed up to 50,000kg (110,231lbs) into the AN-124-100/150M and AN-225 aircraft. Although the system is similar to the OPTG-120M ramp system, it allows the loading of higher, but lighter pieces. However, the loading concept is the same as the OPTG-120M ramp system.

#### OPKG-50 'Next Generation' Ramp System:

- Lowest profile on the market 0.08m (3.15in):
- Wide track size 5.502m (18ft 6in);
- Length 25m (82ft);
- Brackets can be dismantled, allowing greater space between packed ramp and containers.

## Cargo parameters restricted to the following limits:

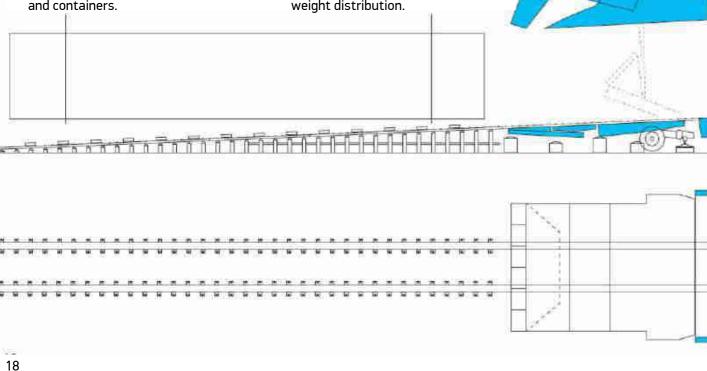
- single cargo weight 50,000kg (110,231lbs);
- max height 4.27m (14ft 1in);
- weight per running meter up to 3600kg (7,937lbs);
- cargo footprint must be flat for proper weight distribution.











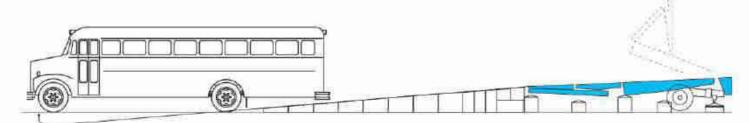




The **OZDKG** ramp is a special piece of external equipment intended for loading and offloading long and heavy-wheeled vehicles into the AN-124-100/150M and AN-225 aircraft. Generally used when parameters like length, road clearance and the weight of vehicle will not allow loading via the aircraft's own integral ramp.

#### Basic parameters:

- maximum weight of vehicle 120,000kg (264,558lbs);
- approach and departure angles to be no less than 5°;
- maximum axle load weight 15,000kg (33,069lbs).







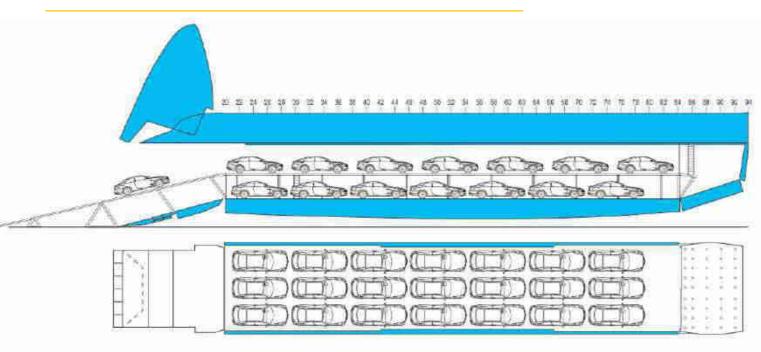








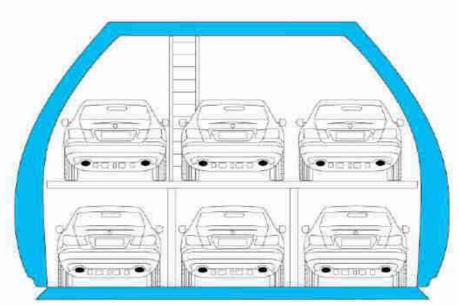
## **Loading of cars – using car rack system**



Antonov Airlines' **Car Rack System** is a special double-deck loading system allowing up to 50 cars to be loaded on two levels. Subject to vehicle dimension and weight, cars can simply be driven onboard.

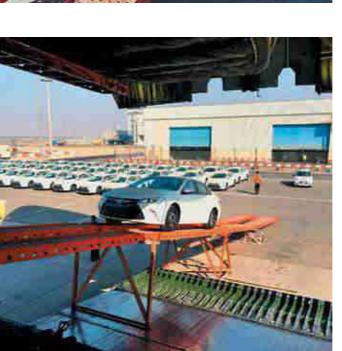
The AN-124-100/150M has the unique ability to adapt its floor loading capacity for the transport of multiple vehicles.

The use of the double-deck loading system means that twice the floor area can be used for the accommodation of vehicles such as saloons, rally cars and certain types of  $4 \times 4s$ .







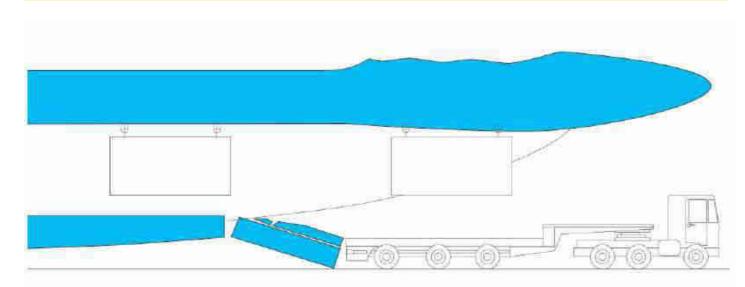








## Loading of cargoes with weight up to 30,000kg (66,139lbs) using aircraft internal cranes via rear cargo



Both the AN-124-100/150M and AN-225 aircraft contain an onboard crane system designed and utilized for the loading and unloading of single pieces weighing up to 30,000kg (66,139lb).

Cargo can be delivered to the aircraft's rear cargo door on trailers/trucks, from which it can be lifted by the aircraft's bridge cranes using four hooking points. The AN-22A also contains an onboard crane system capable of lifting pieces weighing up to 10,000kg (22,046lb).

Cargo loaded by this method must have suitable lifting points and a balanced CoG (Centre of Gravity) to safely load such pieces.







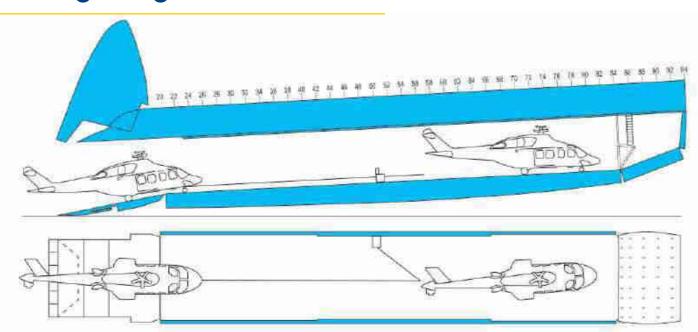








## Loading using aircraft winches



Both the AN-124-100/150M and AN-225 aircraft contain an onboard winch system capable of handling single pieces weighing up to 120,000kg (264,555lbs) (AN-124-150M) and 200,000kg (440,000lbs) (AN-225).

Generally used in conjunction with a ramp system and external cranes, the aircraft's onboard winch system is arranged using a loading pulley block system depending on the weight of item to be loaded.

















## Loading via nose and rear cargo ramps

**Loading of self-propelled vehicles via nose and rear cargo ramps** is the simplest method of loading the AN-124-100/150M and AN-225 aircraft.

The aircraft nose door is opened, the aircraft 'kneels', its ramp is unfolded, and vehicles are simply driven into the cargo hold.

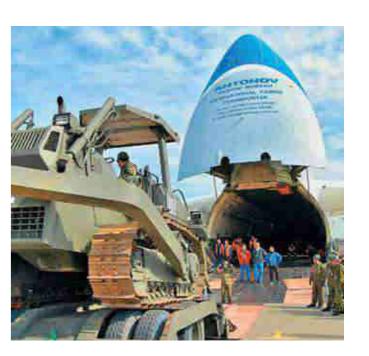
Loading can be carried out through the nose cargo door and offloading via the rear cargo door.

















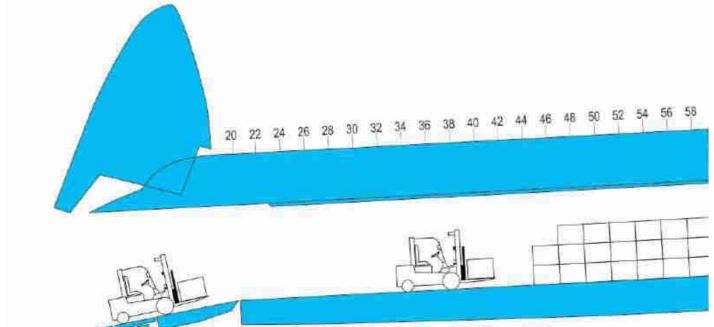


# Loading of general cargo using forklift

Loading of general cargo using forklift – another simple method of loading. Forklifts can be used for loading and offloading of wooden pallets, small crates and similar items through the nose cargo door. Forklifts are not the property of Antonov Airlines and are not carried on our aircraft, but they can provided locally with prior notice.









### **KEY DATA**







OPEN 24/7

Flying 365 days a year



#### UKRAINE-US OPEN SKIES AGREEMENT

Exercising fifth freedom traffic rights to and from the US since 2015



#### WHY CHOOSE ANTONOV AIRCRAFT?

- You can load more we are the only operator of the certified AN-124-100M-150 aircraft, offering an increased payload of up to 150,000kg (330,693lbs);
- You will benefit from unrivalled and unsurpassed experience - we created, developed and continue to lead the AN-124 transportation market;
- We are the world's only airline to offer payloads ranging from 5,500kg (12,346lbs) to 250,000kg (551,156lbs);
- Your valuable cargo will be safely transported within hours or days, saving you time and potentially cost;
- You will be provided with round-the clock communication;
- We are the only airline to use a Flight Manager on each aircraft, providing you with a dedicated point of contact during loading and offloading of cargo.
- You will enjoy a seamless experience from quotation through to delivery, you will be guided by the same project manager, providing a holistic approach to every operation;

With dedicated professionals accompanying you and your shipment on the ground and in the air, all supported by an unrivalled technical expertise.



### **Antonov Aircraft Family - the Record Breaker**

- The AN-225 'Mriya', a modified six-engine version of the AN-124 'Ruslan', is a truly unique aircraft. Not only has it set 240 world records, but it is a recordbreaker in its own right. The AN-225 is the holder of two Guinness World Records: the aircraft with the heaviest take-off weight; and the largest wingspan of any aircraft currently flying.
- On September 22, 1993, an Antonov Airlines
   AN-124-100 carried the heaviest single piece of cargo,
   flying a 124,000kg (264,555lbs) power plant generator
   from Dusseldorf, Germany, to New Delhi, India, setting
   a Guinness World Record.
- On September 11, 2001, during one flight, the AN-225 set 214 national and 124 international records, including the transportation of the heaviest payload ever airlifted, at 253,820kg (559,577lbs).
- On June 16, 2004 the AN-225 set six world records, including a new payload record for an aircraft when it took off from Prague, Czech Republic carrying a commercial payload of 247,000kg (544,542lbs).
- In August 2009, the AN-225 carried the heaviest 'monocargo' (single piece) in the history of aviation. A generator and loading frame weighing a total of 189,000kg (416,674lbs) was transported from Frankfurt, Germany, to Yerevan, Armenia. The transportation found its way into the Guinness World Records.
- The following year, on June 11, 2010, the AN-225 carried the world's longest piece of air cargo two 42.1m (137ft 9.5in) test wind turbine blades from Tianjin, China, to Skrydstrup, Denmark.

 On September 27, 2012, the AN-225 broke another Guinness World Record for the highest altitude art exhibition, at 10,150m (33,300ft) above sea level. The airborne exhibition was organised by Producer Centre Boyko and included 500 works of art created by 120 artists.



- In November 2016, Antonov Airlines performed the air transportation of a 155-tonne transformer from São Paulo, Brazil, to Santiago, Chile. The total payload (including packaging) was 182,000kg (401,241lbs). It was the world's second heaviest piece transported by air, and the heaviest piece carried across South America by air.
- The AN-22 holds its own Guinness World Record. With a wing span of 64.4m (211ft 3in) and a maximum take-off weight of 250,000kg (550,000lbs), the AN-22 is the largest propeller driven aircraft ever to enter production. The AN-22 is powered by four 11,030kW (14,79hp) contra-rotating turboprop engines and has a cruising speed of 680 km/h (422 mph).



#### **HEADQUARTERS**

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#### **NETWORK**

**NEWYORK - LOS ANGELES** BUDAPEST - JAKARTA PHNOM PENH - YANGON KUALA LUMPUR