

GUIDE TO FREIGHT

CAPABILITIES OF OUR AIRCRAFT AND TRUCKS



Volga  Dnepr



Volga-Dnepr

Volga-Dnepr is one of the major cargo carriers with long-standing expertise in integrated logistics services. Throughout 30 years the company has been delivering cargo worldwide aboard An-124-100/150 and IL-76TD-90VD, as well as providing services in insurance, MRO, trucking, and training areas.

FLEET OF STRATEGIC PARTNERS

9 An-124-100

2 An-124-150

5 IL-76TD-90VD

ATLAN

2 An-12BP

VOLGA-TRUCKS

35 truck tractors and semi-trailers

Volga-Dnepr - a team of experienced professionals offers individual logistics solutions tailored to the needs of its customers.

Get to know our services:

- **CHARTER CARGO OPERATIONS**
- **SCHEDULED CARGO OPERATIONS**
- **MULTIMODAL OPERATIONS**
- **INTERNATIONAL EXPRESS-DELIVERY**
- **CUSTOMS CLEARANCE OF CARGO**

VOLGA-DNEPR

our fleet of freighters

An-124-150



An-124-100



IL-76TD-90VD



FLEET OF STRATEGIC PARTNERS

ATRAN

An-12BP



 ATRAN

VOLGA-TRUCKS

VOLVO/MERCEDES



 VOLGA-TRUCKS

AIRCRAFT SPECIFICATION

An-124-100/150

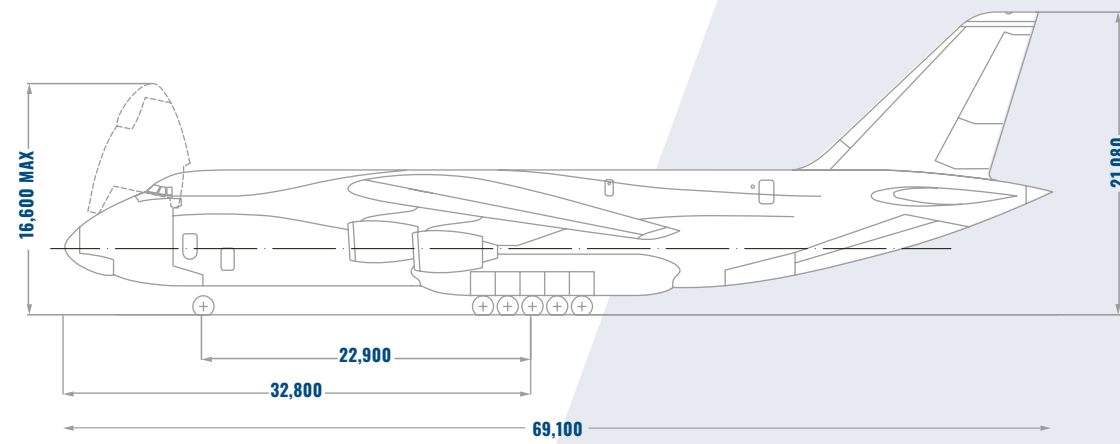
ENGINE TYPE	4x Lotarev D-18 T
ENGINE TAKE-OFF THRUST	4x 24 T Σ = 96 T
MAXIMUM TAKE-OFF WEIGHT	392,000 / 402,000 kg
OPERATING EMPTY WEIGHT	192,215 / 192,559 kg
MAXIMUM PAYLOAD INCL. EQUIPMENT WEIGHT	120,000 / 150,000 kg
MAXIMUM LOADING WEIGHT	330,000 / 360,000 kg
MAXIMUM ZERO FUEL WEIGHT	306,000 / 335,000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

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 needs 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).



DRAWING OF AIRCRAFT



THE VOLGA-DNEPR'S FLEET OF AIRCRAFT



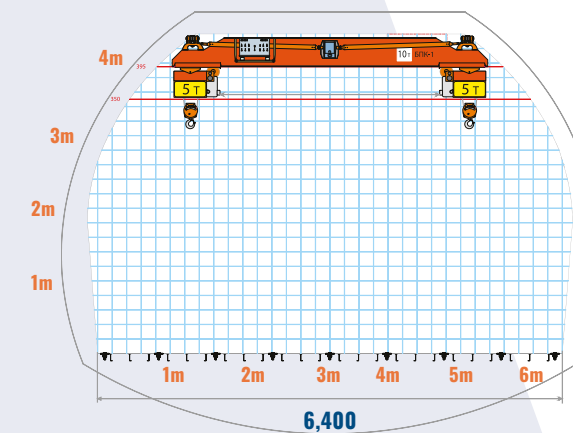
PAYLOAD INCL. EQUIPMENT WEIGHT

An-124-100
120,000 kg
An-124-150
150,000 kg

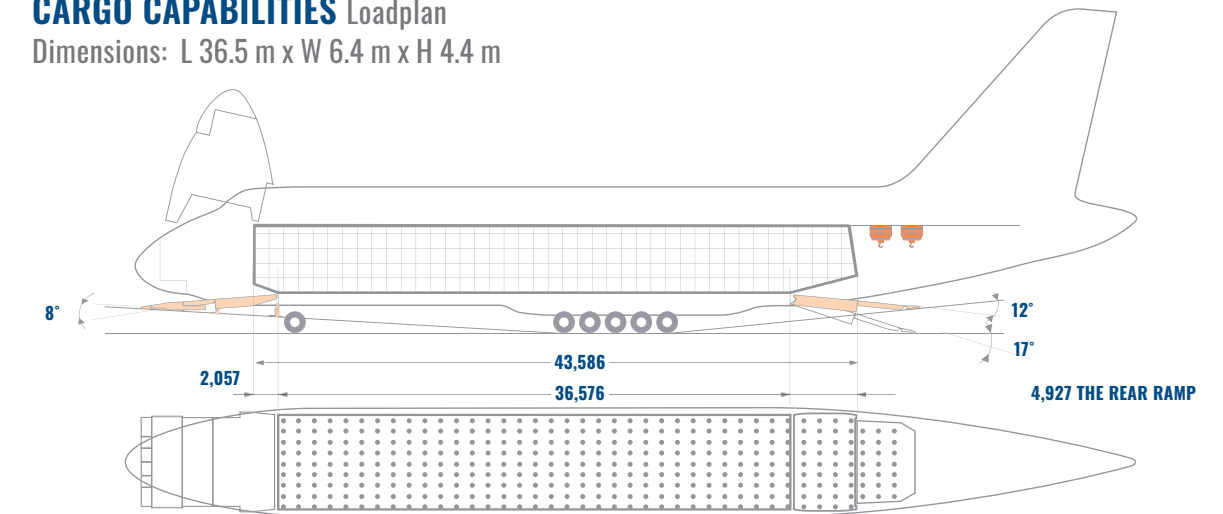
LOADING METHODS

- ▶ 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 oversized items winched into the aircraft using the tracking system
- ▶ Floor roller system for transportation of general cargo aboard An-124-100/150

CROSS SECTION Frame No. 20 CROSS



CARGO CAPABILITIES Loadplan Dimensions: L 36.5 m x W 6.4 m x H 4.4 m



AIRCRAFT SPECIFICATION

An-124-100/150

ENVIRONMENT IN THE CARGO CABIN

G-FACTORS

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

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

TEMPERATURE RANGE

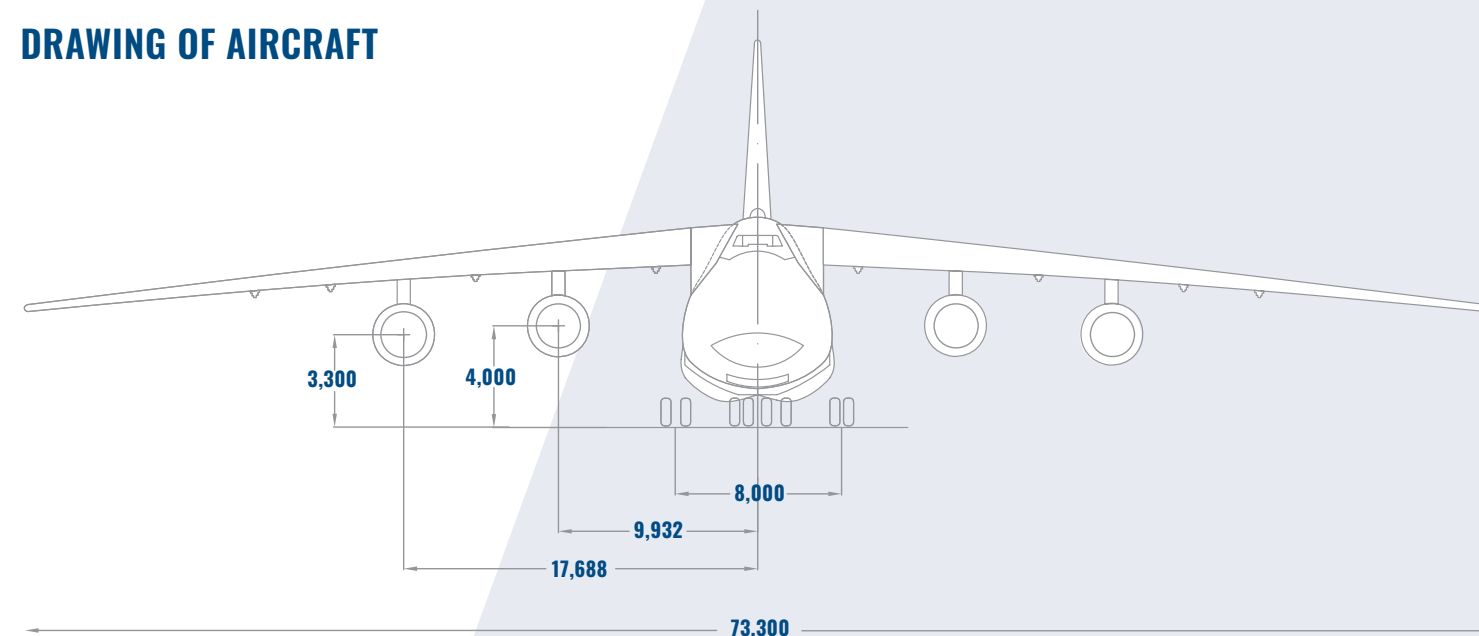
- Air Temperature –
 - ▶ Up till 20°C upon request
- Humidity during flight –
 - ▶ 10-15% RH



AIR PRESSURE

- Minimum pressure (unpressurised cargo cabin) ▶ 23 kPa
- Minimum pressure (pressurised cargo cabin) ▶ 47 kPa (ΔP 0.25) +0/1/-0.02 kg/cm²
- Air pressure change rate
 - ▶ 70 mbar/min

DRAWING OF AIRCRAFT



THE VOLGA-DNEPR'S FLEET OF AIRCRAFT

An-124-100/150

AIRCRAFT SPECIFICATION

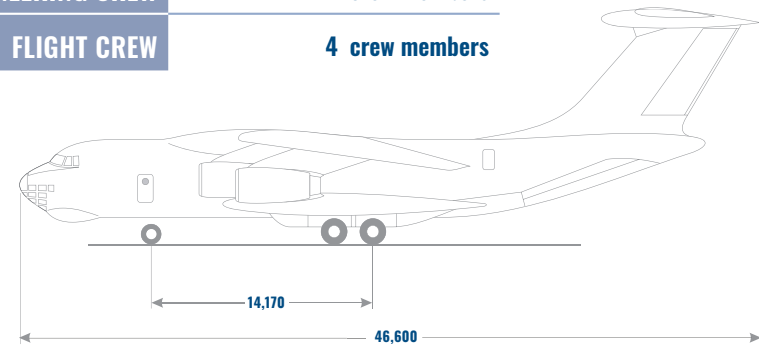
LOADING EQUIPMENT

- ▶ **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 center 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

ENGINE TYPE	4x PS-90A-76
ENGINE TAKE-OFF THRUST	4x 16,000 kg Σ = 64,000
MAXIMUM TAKE-OFF WEIGHT	195,000 kg
OPERATING EMPTY WEIGHT	97,243 kg
MAXIMUM PAYLOAD INCL. EQUIPMENT WEIGHT	50,000 kg
MAXIMUM LOADING 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



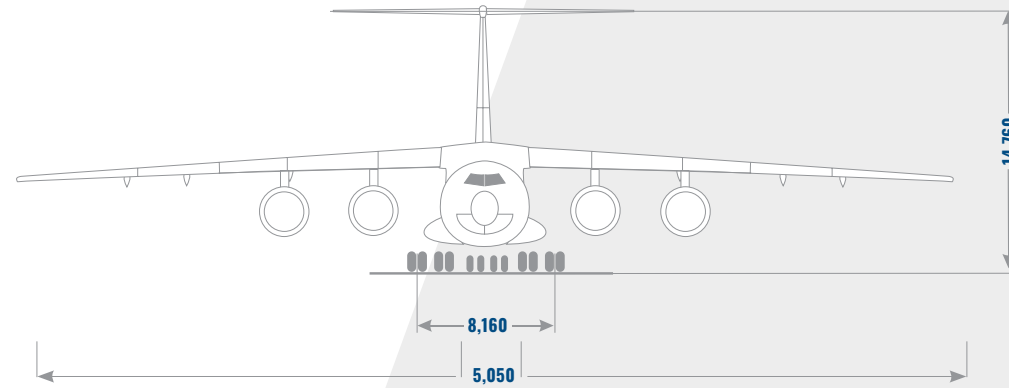
THE VOLGA-DNEPR'S FLEET OF AIRCRAFT

IL-76TD-90VD

Volga-Dnepr participated in the cross-section modernization 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.



DRAWING OF AIRCRAFT



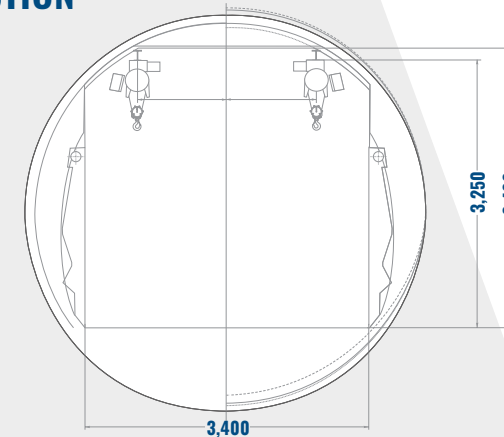
MAX. LANDING WEIGHT
195,000 kg

PAYLOAD INCL. EQUIPMENT WEIGHT
50,000 kg

RANGE
4,500 km

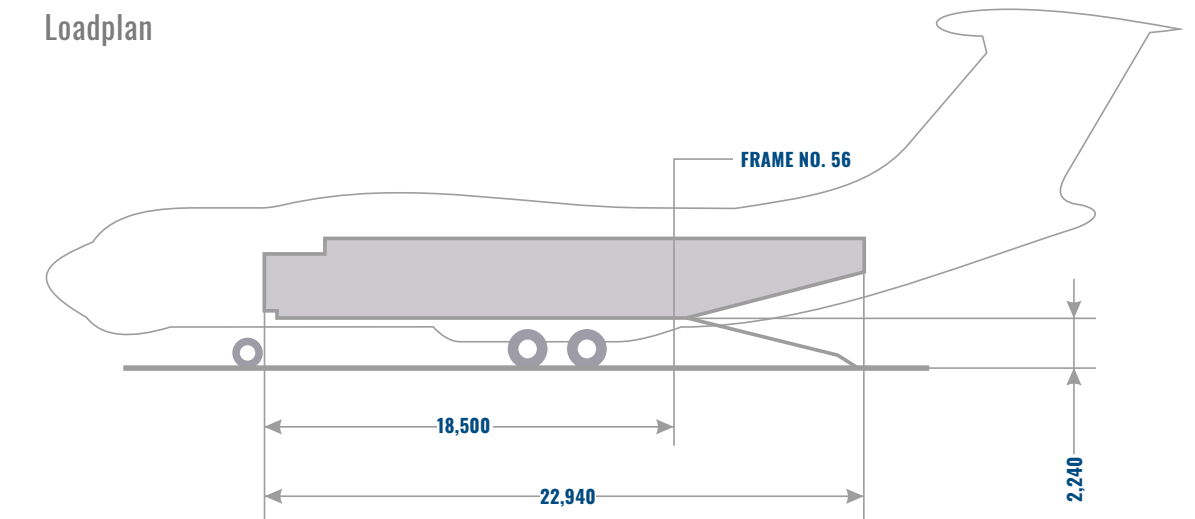
CRUISING SPEED
750 km/h

CROSS SECTION



CARGO CAPABILITIES

Loadplan



AIRCRAFT SPECIFICATION

IL-76TD-90VD

▼ ENVIRONMENT IN THE CARGO CABIN

G-FACTORS

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

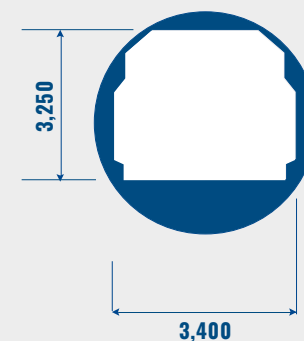
The lashing and preparation of cargo for flights must be done in respect of these maximum values.

AIR PRESSURE

- Maximal pressure
 - ▶ 73.5 kPa (2,500 m)
- Air pressure change rate
 - ▶ 66.5 Pa/sec

TEMPERATURE RANGE

- Air temperature –
 - ▶ up till 25°C upon request
- Humidity during flight –
 - ▶ 10-15% RH

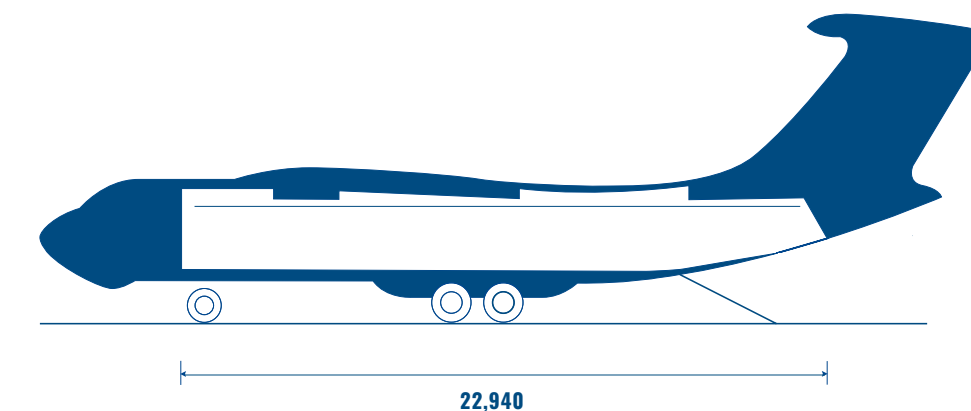


IL-76TD-90VD

AIRCRAFT SPECIFICATION

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 12,000 kgs
- ▶ 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
- ▶ Floor roller system for transportation of general cargo – up till 8 PMC per flight



AIRCRAFT SPECIFICATION

An-12BP

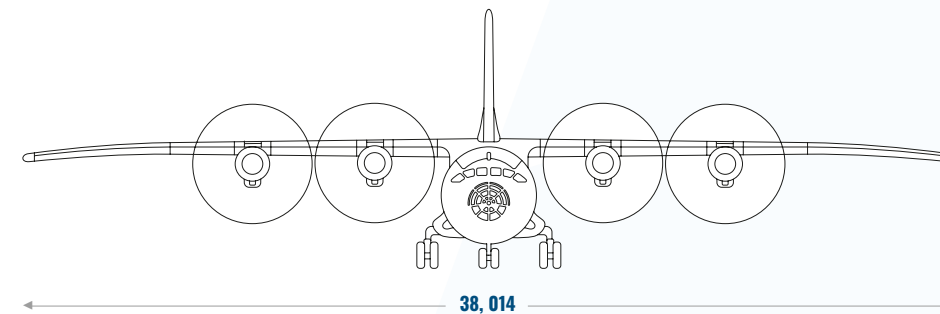
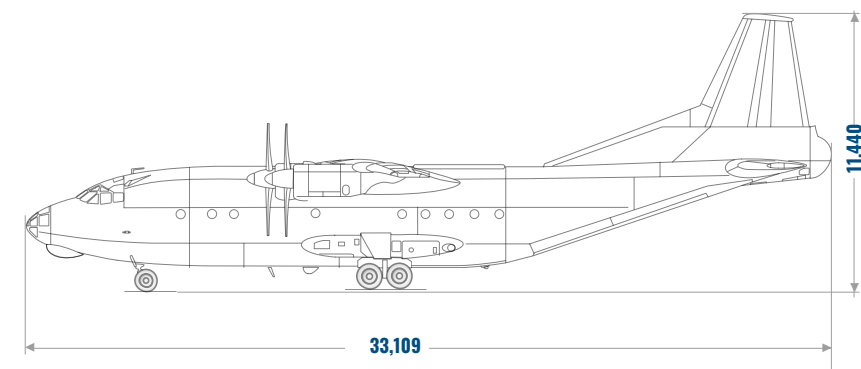
ENGINE TYPE	AI-20M
MAX. TAKE-OFF WEIGHT	61,000 / 64,000 kg
MAXIMUM PAYLOAD INCL. LOADING EQUIPMENT	20,000 kg
MAXIMUM LOADING WEIGHT	58,000 / 61,000 / 64,000 kg
RANGE	1,000 - 3,000 km
CRUISING SPEED	670 km/h
CARGO CABIN VOLUME	75 m ³
CREW	5 crew members

An-12BP

ATRAN airlines is a cargo carrier providing charter operations across Russia aboard its **An-12BP**. The company delivers vital products/equipment to hard-to-reach regions and develops its network based on the seasonal demand. An-12BP is a reliable easy-to-maintain freighter capable to operate under severe weather conditions.



DRAWING OF AIRCRAFT



AIRCRAFT FLEET OF STRATEGIC PARTNERS

An-12BP

AIRCRAFT SPECIFICATION



MAXIMUM PAYLOAD INCL. LOADING EQUIPMENT

10,000 kg

RANGE

3,300 km

MAXIMUM PAYLOAD INCL. LOADING EQUIPMENT

20,000 kg

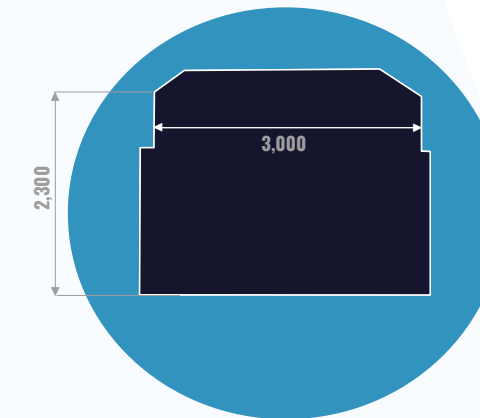
RANGE

1,000 km

TECHNICAL CARGO SPECIFICATIONS FOR TRANSPORTATION ABOARD AN-12BP

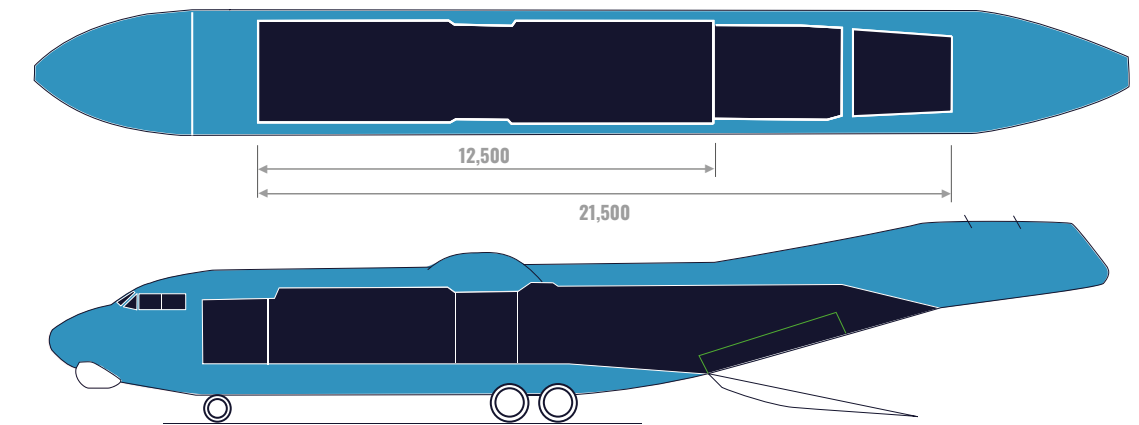
- ▶ Length up to 12.5 m
- ▶ Width up to 3 m
- ▶ Height up to 2.3 m
- ▶ Temperature range aboard during the flight – from +5°C till +25°C

CROSS SECTION



CARGO CAPABILITIES

Loadplan



VOLGA-TRUCKS



Volga-Trucks is one of the major trucking companies in Privolzhsky Federal District which has been working in the market since 1994. The Company specializes in cargo transportations across Russia and CIS, including possibility to deliver the goods to the largest hub airports. Its extensive route network, modern fleet and experienced employees allow the company to offer customized logistics solutions.

- ▶ **Transportation of temperature-sensitive cargo**
load space | capacity: < 20 tonnes | < 90m³ | < 33 europallets
-20 - +20°C
- ▶ **Refrigerated road transportation service**
load space | capacity: < 20 tonnes | < 90m³ | < 33 europallets
- ▶ **Transportation of cargo with special loading requirements**
load space | capacity: < 96m³ | < 22 tonnes
- ▶ **Dangerous goods transportation**
load space | capacity: 1.5 - 20 tonnes | 20 - 90 m³
- ▶ **Outsized cargo transportation**
superheavy, out-of-gauge and long items of cargo
- ▶ **Liquid cargo transportation (tanks with thermal protection)**
capacity: < 20 tonnes




TRUCK TRACTORS
VOLVO FH
MERCEDES ACTROS


SEMI-TRAILERS
KRONE SD
SCHMITZ SKO

TRUCKS FLEET


FLEET OF STRATEGIC PARTNERS




Extensive network of maintenance bases



Carrier liability insurance

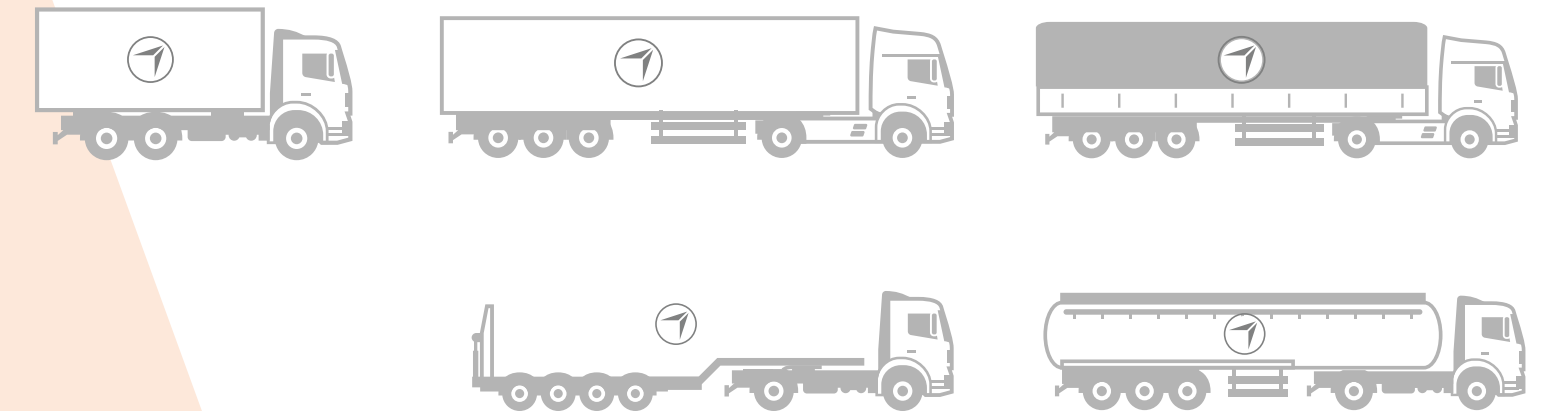


Transport movement monitoring



Experienced team and high competence

CAPABILITIES



**TRANSPORTATION OF PALLETIZED CARGO –
UP TILL 8 PMC PER FLIGHTS**



CARGO PARADROPS

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