


**Presents passenger medium range narrow body  
Tu-204-100E aircraft**



Build. 6, the 1st km. of Rublevo-Uspenskoe highway,  
Moscow region, Odintsovsky district, 143030, Russian Federation  
Phone: +7(495) 710-99-63. Fax: +7(495) 710-99-60  
E-mail: [ifc@ifc-leasing.com](mailto:ifc@ifc-leasing.com)  
Web.: [www.ifc-leasing.com](http://www.ifc-leasing.com)



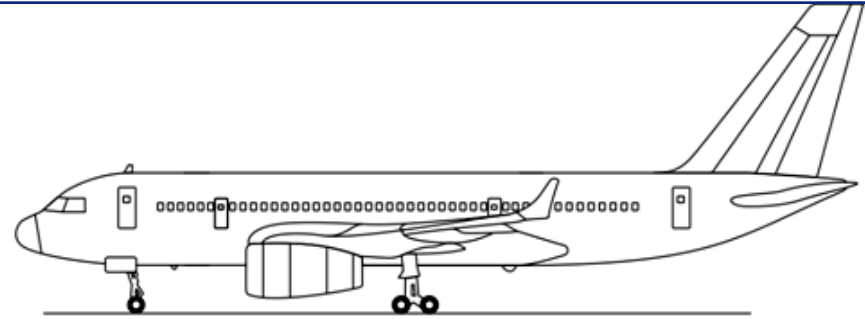
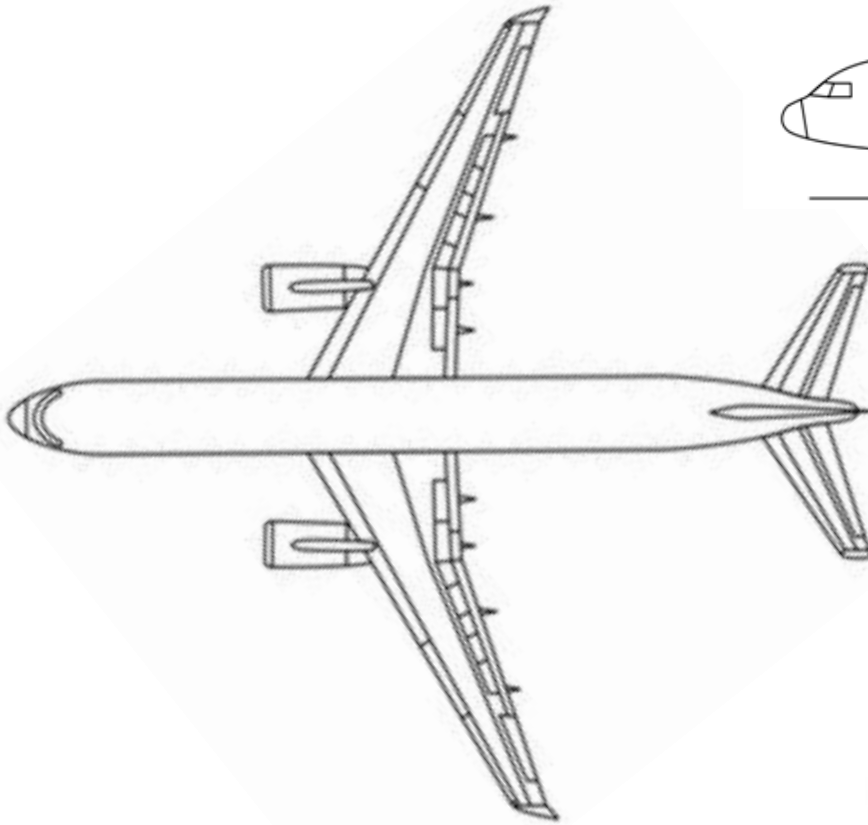
The Tu-204-100E is a narrow-body aircraft designed for carrying passengers and baggage over medium-range domestic and international routes. The Tu-204-100E provides the passengers with the up-to-date level of comfort meets the international ecological requirements and can operate in any region all over the world. Due to the aircraft systems high reliability and "on condition" maintenance, the aircraft operational cost was decreased.

The aircraft is powered by two turbofan two-shaft PS-90A engines, produced by Perm Motors Plant (Perm, Russia) and equipped with Auxiliary Power Unit TA-12-60, manufactured by "Aerosila" (Moscow region, Russia).

The Tu-204-100E aircraft designed by TUPOLEV DESIGN BUREAU (Moscow, Russia) and manufactured by Ulyanovsk Aviation Industrial Complex "Aviastar" (Ulyanovsk, Russia).



## Tu-204-100 E General view (Dimensions)



|                           |           |
|---------------------------|-----------|
| Length, m                 | 46,138    |
| Wing span, m              | 41,835    |
| Fuselage diameter, m      | 3,8 x 4,1 |
| Height, m                 | 13,87     |
| Wing area, m <sup>2</sup> | 184,2     |



## Operating Weights & Fuel Capacity

|                         |        |
|-------------------------|--------|
| Max taxi weight, t      | 105.35 |
| Max takeoff weight, t   | 105    |
| Max payload, t          | 21     |
| Max landing weight, t   | 88     |
| Max zero fuel weight, t | 83.4   |
| Max fuel, t             | 35.71  |

## Aircraft Performance Characteristics (ISA)

|                                |       |
|--------------------------------|-------|
| Cruising speed, km/h           | 850   |
| Maximum flight altitude, m     | 12000 |
| Range with maximum payload, km | 3800  |
| Range with maximum fuel, km    | 7600  |
| Crew                           | 3     |

## Anticipated Operating Conditions

|   |             |
|---|-------------|
| Airfield elevation range (relative to sea level), m | -300 – 2850 |
| Take off distance, m                                | 2050        |
| Landing distance, m                                 | 2120        |
| Range of operational temperatures (sea level), °C   | -45...+45   |

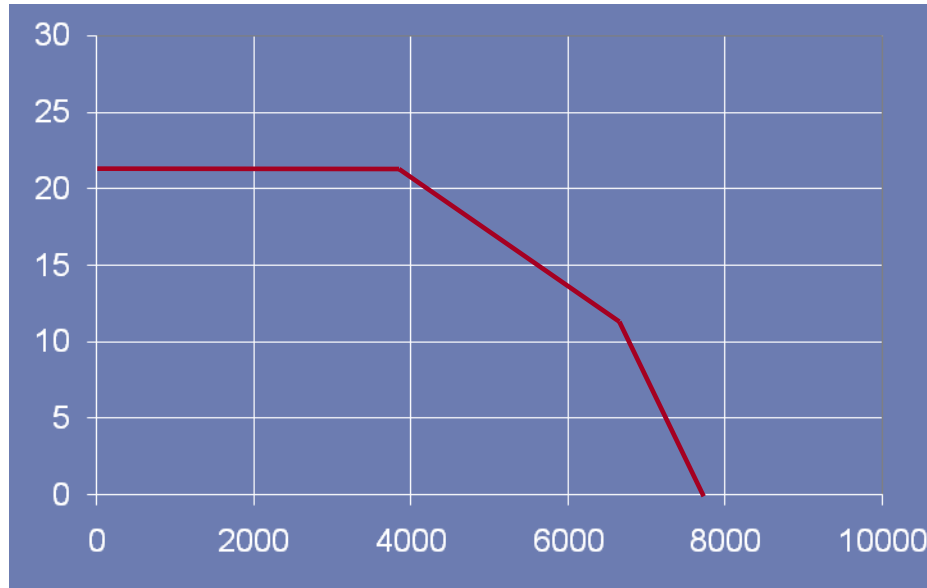
## Lifetime

|                                 |        |
|---------------------------------|--------|
| Aircraft lifetime, flight hours | 45 000 |
| years                           | 20     |
| flights                         | 25 000 |



# Tu-204-100 E Payload – Range Diagram

Payload, t



Range, km



## Engines

The aircraft is powered by two attached to underwing pylons PS-90A turbofan engines manufactured by Perm Motors Holding (Russia). The engines feature high bypass and compression ratio resulting in distinguished aircraft flight performance.



## Engine performance:

- takeoff thrust (ISA, H=0) – 16000 kg
- cruise thrust (ISA+10°C, H=11 000 m, M=0,8) – 3500 kg
- by-pass ratio at maximum continuous power – 4,4
- compression ratio at maximum continuous power –31,1
- fan diameter – 1,90 m
- engine length – 4,964 m
- engine weight – 2950 kg

## Auxiliary Power Unit (APU)

The aircraft is equipped with Auxiliary Power Unit TA-12-60, manufactured by "Aerosila" (Moscow region, Russia).

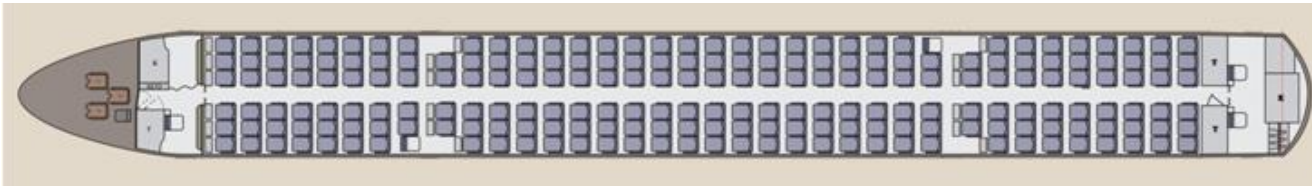


Tu-204-100 E layouts , distinguished by utmost comfort and functionality, correspond to all safety requirements and meet any request of the Customer. Different layout variants can be designed according to customer request.

## High level of the comfort for the passengers is provided by

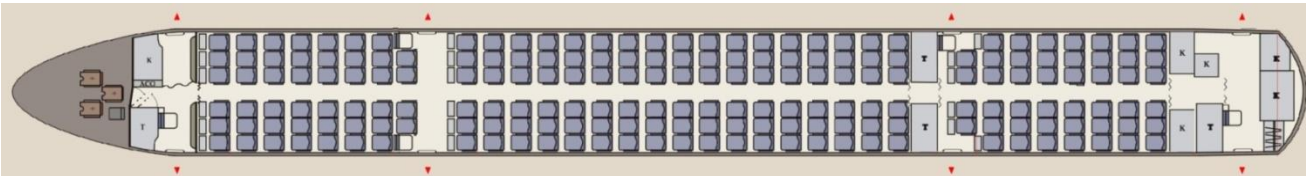
- Improved seat ergonomics, high ceiling, wide center aisle and large baggage bins
- Multilevel cabin lightning system
- Low noise level in the passenger cabin
- Standard entertainment system provides all the passengers with video and audio programs, AIRSHOW flight map and main flight data.

## Tu-204-100 E mono-class layout for 210 passengers



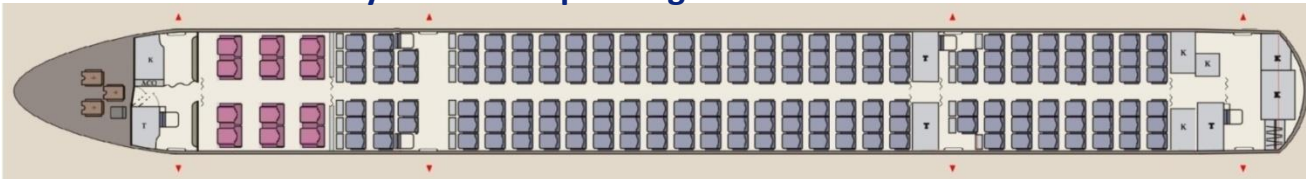
Economy class: 210 seats with the pitch 32''

## Tu-204-100 E mono-class layout for 194 passengers



Economy class: 194 seats with the pitch 32''

## Tu-204-100 E two-class layout for 176 passengers

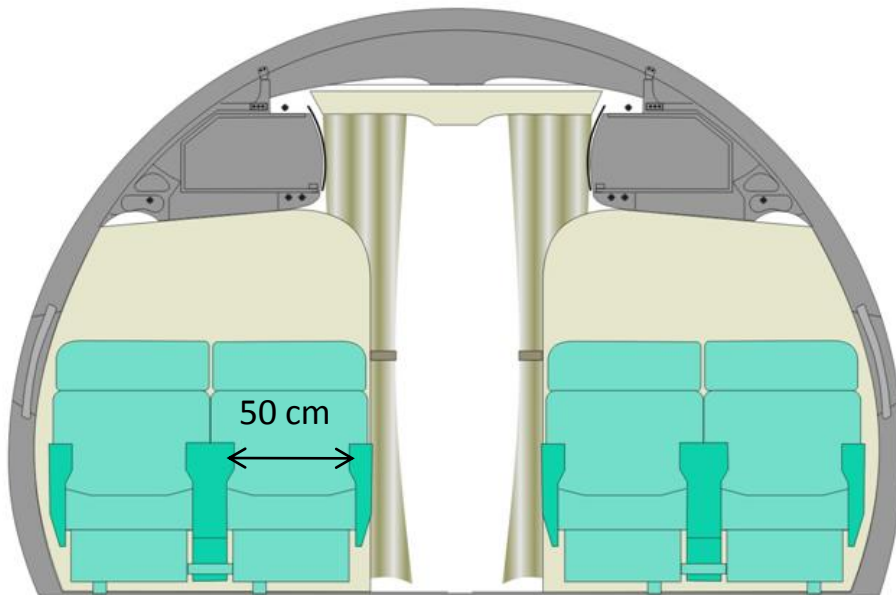


Business-class: 12 seats with the pitch 54''

Economy class: 164 seats with the pitch 32''



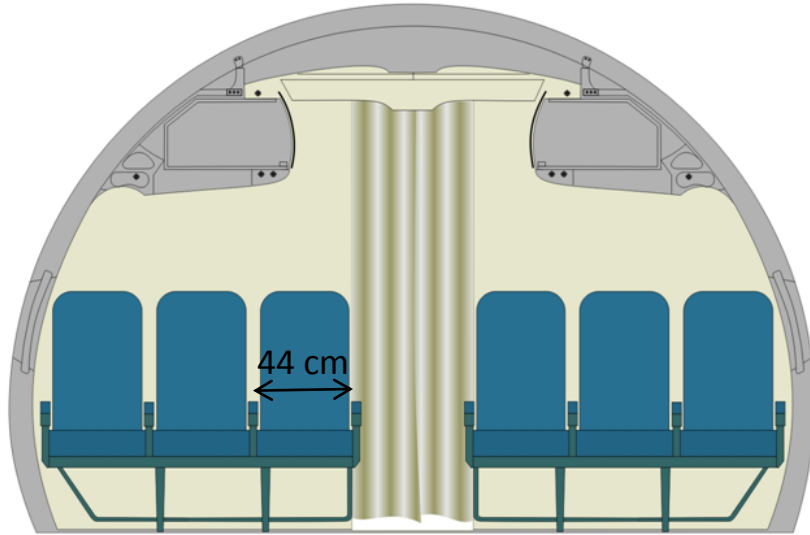
## Business class cabin dimensions



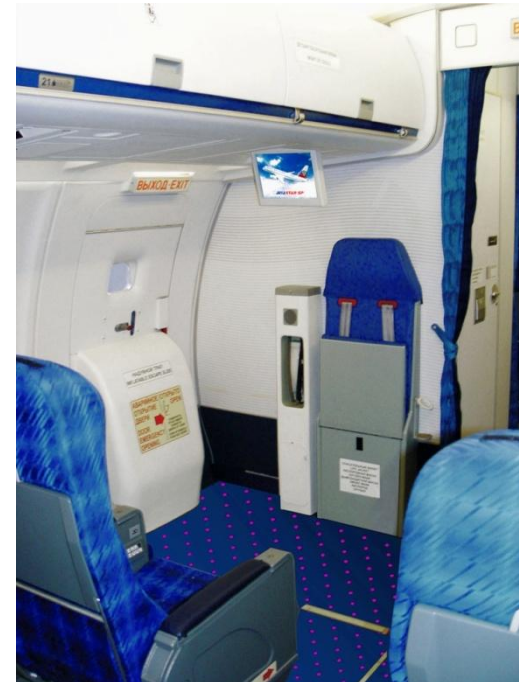
|                                    |       |
|------------------------------------|-------|
| Pitch, mm                          | 1200  |
| Aisle height, mm                   | 2155  |
| Aisle width, mm                    | 730   |
| Baggage bin volume, m <sup>3</sup> | 0,056 |



# Economy class cabin dimensions



|                                    |       |
|------------------------------------|-------|
| Pitch, mm                          | 810   |
| Aisle height, mm                   | 2155  |
| Aisle width, mm                    | 470   |
| Baggage bin volume, m <sup>3</sup> | 0,056 |





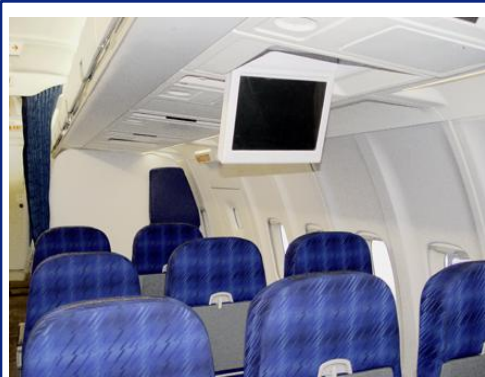
- Galleys have all necessary equipment including:
  - electric oven,
  - coffee machine,
  - boiler,
  - trolleys,
  - etc.

to provide passengers with hot meals several times



Airplane lavatories are equipped with self-contained fire extinguishing system and fire and smoke warning system. One lavatory has table for babies' hygiene.





### ■ Audio system in all the compartments provides:

- Ear- or speaker-phone replay (according to flight attendant choice) of not less than 40 voice messages in three languages, duration of each message is up to 5 minutes.
- Simultaneous transmission of up to 10 stereo programs
- Each program duration is up to 12 hours
- Channel choice from each passenger seat

### ■ Individual interactive video entertainment system for business class passengers provides:

- Video programs review on individual display (10 inch) mounted into seat armrest
- Flight mode and route map demonstration
- Audio programs playback from the server library
- Computer games

### ■ Upper information video system for economy class passengers provides:

- Video programs review on folding displays (12 inch) mounted into the ceiling
- Video films, clips and service programs demonstration from the server
- Flight mode and route map demonstration





## **Aircraft entertainment system capabilities could be extended by the following options:**

- Local area network access (order of goods and services, available on board);
- System adaptation for Internet access;
- Direct satellite TV broadcasting;
- In-flight cell phone communication;
- Possibility of using the server library (guides, time table, rules for filling in the forms, advertising, etc.)

**Control panel and entertainment system server are located in the flight attendants' cabin.**

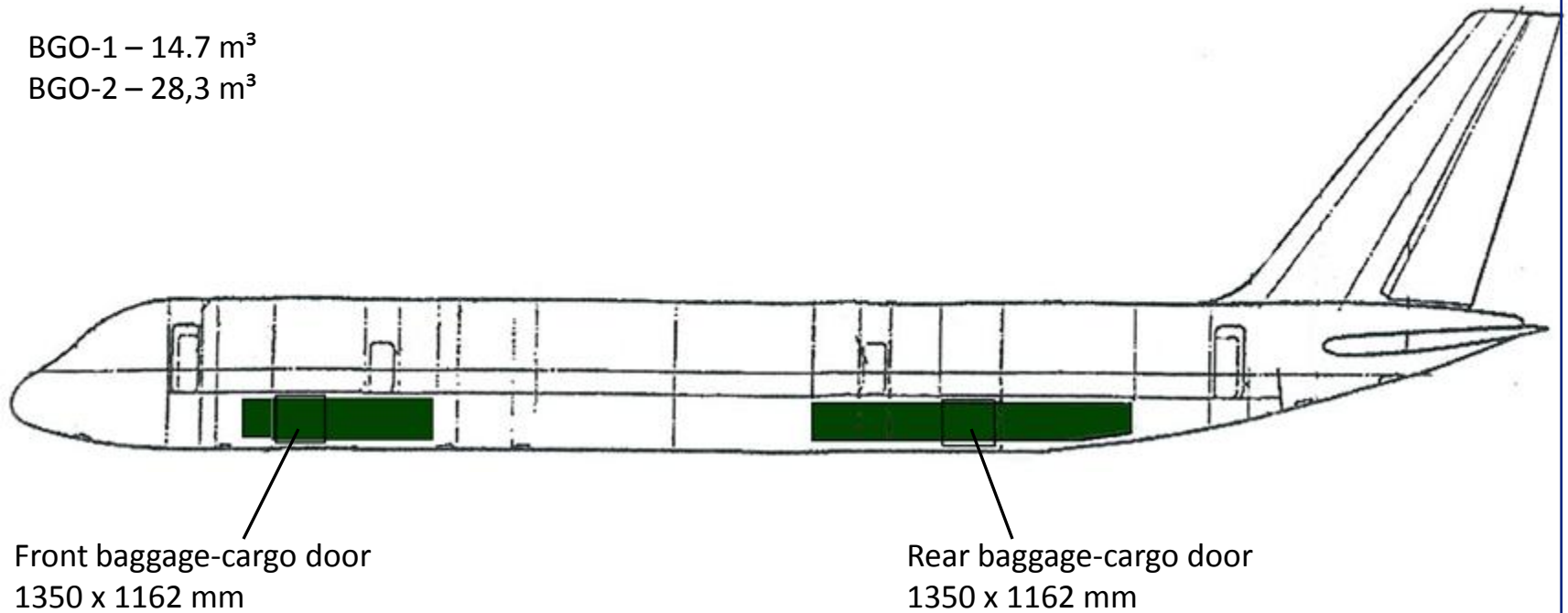
**According to ICAO requirements aircraft is equipped with passenger compartment surveillance system using 6-8 video cameras with the record time possibility up to 10 hours**



The aircraft has two baggage-cargo compartments BGO-1 and BGO-2 for the bulk cargo transportation.  
Baggage compartment dimensions:

BGO-1 – 14.7 m<sup>3</sup>

BGO-2 – 28,3 m<sup>3</sup>





The Tu-204-100 cockpit is designed in compliance with all modern ergonomics requirements.

The Tu-204-100 aircraft is piloted by 3 crew members and equipped with modern Russian-made avionics which includes six multifunctional color-LCD displays (EFIS), Flight Management System (FMS), Inertial Navigation System, Collision avoidance System (CAS) including mode “S” transponder, EGPWS system, VHF communications (compliant with ICAO requirements of item 4.7 Appendix 10), and equipment permitting flights in RVSM conditions. The avionics complex complies with modern requirements on international routes in Europe and North America (RNP-1, RNP-5, RNP-10, RNP-12.6, RNP-20) and allows to navigate and land under ICAO CAT II category , speed hold, automatic speaking (in English) on take-off speed and landing altitude.

The crew and passenger cabins correspond to aircraft requirements against the illegal intrusion (the Amendment 27 to a Part 1 of the Appendix 6 to ICAO). Crew cabin could be equipped with additional seat for supernumerary crew member. Both crew and passenger cabins also correspond to safety requirements (Chapter 11 of the Appendix 8 to ICAO).



- Automatic Flight Control System (AFCS) VSUP-85-3
- Autothrottle (ATS) VSUT-85-3
- Flight Management System VSS-95-1V
- EFIS SEI-85-2M
- Inertial Navigation System NSI-2000MT Honeywell HG2030AE21
- Air Data Computer SVS-96
- Critical Condition Warning System SPKR-85-2
- EGPWS «Honeywell»
- Radio Unit Control Panel KPRTS-95M-1
- Instrumental Landing System (ILS)
- Chronometer HAE-85M
- Radioaltimeter RV-85
- VHF Omnidirectional Radio (VOR)
- Distance Measuring Equipment (DME) DME/R-85
- Automatic Direction Finder (ADF) ARK-25
- Weather Radar RDR-4B by «Honeywell»
- Fault Detection Isolation System (FDIS) SSLO-95
- Radio Magnetic Indicator (RMI) KI-13BS-1



- Emergency Warning System SAS-8-4
- Multifunctional Flight Display (MFD) with MFD control panel KISS-1-9A
- Computer-Aided Wheel Control System - ASSHU-204M
- Cabin Pressure Control System (CPCS)
- Anti-icing System
- Fire Protection System
- Selective Calling System AVSA-E
- Airborne Internal Communication and Passenger Equipment (AICE-S)
- Internal Communication System (Intercom) AVSA-O
- HF Radio
- VHF Radio
- Passenger Entertainment System BRIS-P
- Hijack Alarm System (HAS) SSO-B
- Cockpit Voice Recorder (CVR) or ZBN-GA (Kursk)
- Voice Information Reporting System ALMAZ-UP



  
 ЦЗ.1.1  
 Форма А-1

**МЕЖГОСУДАРСТВЕННЫЙ АВИАЦИОННЫЙ КОМИТЕТ**  
*INTERSTATE AVIATION COMMITTEE*

**АВИАЦИОННЫЙ РЕГИСТР**  
*AVIATION REGISTER*

**СЕРТИФИКАТ**  
**ТИПА**  
*TYPE CERTIFICATE*

№ СТ 233-Ty-204-120CE

**ИЗДЕЛИЕ**  
*PRODUCT*

Самолеты:  
 Ty-204-120CE  
 Ty-204CE  
 Ty-204-100E

**НАСТОЯЩИЙ СЕРТИФИКАТ, ВЫДАННЫЙ**  
*THIS CERTIFICATE ISSUED TO*

ОАО "Туполев"  
 г. Москва, Россия

УДОСТОВЕРЯЕТ, ЧТО ТИПОВАЯ КОНСТРУКЦИЯ УКАЗАННЫХ ИЗДЕЛИЙ  
 СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ РАСПРОСТРАНЯЕМЫХ НА НИХ  
 СЕРТИФИКАЦИОННЫХ БАЗИСОВ  
*CERTIFIES THAT THE ABOVE-MENTION PRODUCTS' TYPE DESIGNS MEET THEIR CERTIFICATION BASES  
 REQUIREMENTS*

ОПИСАНИЕ ТИПОВЫХ КОНСТРУКЦИЙ И СЕРТИФИКАЦИОННЫХ БАЗИСОВ,  
 ОСНОВНЫЕ ЭКСПЛУАТАЦИОННЫЕ ОГРАНИЧЕНИЯ И ХАРАКТЕРИСТИКИ ИЗДЕЛИЙ  
 СОДЕРЖАТСЯ В КАРТЕ ДАННЫХ, Издание 06 от 24.12.2007г., КОТОРАЯ ЯВЛЯЕТСЯ  
 НЕОТЪЕМЛЕМОЙ ЧАСТЬЮ НАСТОЯЩЕГО СЕРТИФИКАТА  
*THE DESCRIPTION OF TYPE DESIGNS AND CERTIFICATION BASES, BASIC OPERATING LIMITATIONS AND THE  
 PRODUCTS' PERFORMANCE ARE PRESENTED IN THE DATA SHEET Issue 06 dated December 24, 2007  
 WHICH IS AN INTEGRAL PART OF THIS CERTIFICATE*

**КОПИЯ  
 ВЕРНА**

**ДАТА И МЕСТО ВЫДАЧИ**  
*DATE AND PLACE OF ISSUANCE*

25 декабря 2007г.  
 г. Москва

Дата первоначальной выдачи  
 30 января 2004г.

А.В. Донченко  
 ПОДПИСЬ *SIGNATURE*  
 Генеральный директор  
 Авиарегистра МАК  
 ДОЛЖНОСТЬ *TITLE*



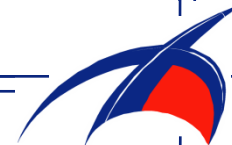
Tu-204-100 E **aircraft** has Type Certificate № CT233-Ty-204-120 CE issued by Interstate Aviation Committee (MAK), which complies with Russian AP-25 Aviation Regulations harmonized with FAR-25 requirements and CS-25 EASA requirements.

PS-90A **engine** has Type Certificate № 16-D issued by Interstate Aviation Committee (MAK).

**Noise requirements** – in compliance with requirements of Chapter 4 International Standard «Environmental protection», Annex 16 to the Chicago Convention on International Civil Aviation (volume I «Aircraft noise», issue 4).

**Emissions** – complies with requirements of Annex 16 to the Chicago Convention on International Civil Aviation (volume II «Aircraft Engine Emissions», issue 1981 with Amendments 1-4).

The aircraft is certified for world wide operations.



Maintenance

Line maintenance

**Form «A»:**  
Before every flight

**Form«B»:**  
Not less then every 120 flight  
hours after forms B, F1, F2

Periodic maintenance \*

**Form (F1):**  
Every 600  $\pm$  60 flight hours

**Form (F2):**  
Every 3000  $\pm$  100  
flight hours

\* As an option periodicity of Form 1 fulfillment can be increased up to 900  $\pm$  60 flight hours and periodicity of Form 2 fulfillment - up to 3600  $\pm$  100 flight hours



The Tu-204-100 product support program is based on the IFC and AVIASTAR experience in the international and domestic product support of Tupolev family aircraft.

The following warranty is granted to the Customer:

- 24 month, 2600 flight hours or 1000 landings – whatever occurs first

The technical support of the airframe and engine is performed on power-by-hour basis at the customer base airport by IFC subsidiary company - “IFC TECHNIK” and engine manufacturer correspondingly and provides:

- Spare parts pool access
- Provision of maintenance checks
- Technical documentation support
- Engineering services
- AOG (aircraft on ground) management
- Spare parts provision and logistics
- Organizing of aircraft components repair and overhaul

