

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

Ilyushin	A45CE
	Revision 1
	IL-103
	September 13, 2002

**TYPE CERTIFICATE DATA SHEET No. A45CE**

This data sheet, which is part of Type Certificate No. A45CE, prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Ilyushin Aviation Complex  
45g Leningradsky Prospect  
Moscow 125100  
Russia

I. Model IL-103, Single engine airplane, Utility Category, approved December 9, 1998

Engine Teledyne Continental Motors, Model IO-360ES

Fuel Aviation gasoline octane grade 100, 100LL ASTM D910-76  
MIL-G-5572  
Russian aviation grade fuel B-95/130 GOST 1012-72

Engine Limits 210 shaft horsepower, 2800 r.p.m.

Propeller and Propeller Limits Hartzell Propeller Model BHC-C2YF-1BF/F8459A-8R  
Diameter 76.4 in (1.94 m), Minimum Diameter 75.0 in (1.90m)  
Propeller speed: 2675 r.p.m.  
Constant speed, hydraulically actuated

Airspeed Limits (IAS)

V <sub>NE</sub> (Never exceed)	340 km/h	183.6 knots
V <sub>NO</sub> (Structural cruising)	280 km/h	151.2 knots
V <sub>A</sub> (Maneuvering)	240 km/h	130.0 knots
V <sub>FE</sub> (Wing flaps extended)	190 km/h	102.6 knots

C.G. Range 20% - 30% MAC  
39.6 in (1.008 m) - 45.36 in (1.152 m) aft of datum

Empty Weight C.G. See Flight Manual. (Record of Weight and Balance)

Datum Frame No "0"

Leveling Means Ref: Section 008.10.00 Maintenance Manual

Maximum Weight Airplanes through serial No. 0201 through 0415: 2530 lbs (1150 kg.)  
See Note 6.  
Airplanes serial No. 0501 and on: 2880 lbs. (1310 kg.)

Page No.	1	2	3	4	5
Rev. No.	1	1	1	1	1

<u>No. of Seats</u>	Two side-by-side
<u>Maximum Baggage</u>	132 lb (60 kg) 104.33 in. (2.65 m) aft of datum.
<u>Fuel Capacity</u>	Total: 52.91 U.S. gal, 330 lbs (150 kg) Each wing tank 26 U.S. Gal. (100. liters), 40.75 in. (1.035 m) aft of datum
<u>Oil Capacity</u>	8 qts. ( 7.52 liters)
<u>Control Surface Movements</u>	Aileron: Up $25^{\circ}\pm 1^{\circ}$ Down $20^{\circ}\pm 1^{\circ}$  Elevator: Up $25^{\circ}\pm 1^{\circ}$ Elevator trim tab: Up $20^{\circ}\pm 1^{\circ}$ Down $20^{\circ}, \pm 1^{\circ}$ Down $20^{\circ}\pm 1^{\circ}$  Rudder: $25^{\circ}$ right, $\pm 1^{\circ}$ , and $25^{\circ}$ left, $\pm 1$  Wing flaps: Up, $0^{\circ}\pm 1^{\circ}$ TO/Landing, Down (maximum), $10^{\circ}\pm 1^{\circ}$
<u>Serial Nos. Eligible</u>	Airplanes serial numbers 0201 through 0415, and 0510 and on, are eligible for import into the United States (See Note 6.)
<u>Certification Basis</u>	The regulations (unless otherwise stated) are Title 14 of the Code of Federal Regulations (14CFR):  1) 14 CFR Part 21.29, 21.183(c), and 21.50 effective February 1, 1965 including Amendment 21-1 through 21- 70.  2) 14 CFR Part 23 effective February 1, 1965, including Amendments 23-1 through 23-42.  3) 14 CFR Part 36 effective November 18, 1969 , including Amendments 36- 1 through Amendment 36-22.  Date of Application for U.S. Type Certificate, March 25, 1993.  AVIATION REGISTER issued Russian Type Certificate No 89-103, dated February 15, 1996 as described in Aviation Register TCDS No. 89-103.
<u>Validation Basis</u>	The applicable airworthiness requirements for a U.S. certification under 14 CFR 21 section 21.29 identified above were established considering the airworthiness requirements applied by the responsible exporting Russian civil aviation authority under the Implementation Procedures authorized by the Agreement between the Government of the Russian Federation and the Government of the United States of America for Promotion of Aviation Safety, dated September 2, 1998. This Type Certificate was issued pursuant to the certification by the Aviation Register that the Model IL-103 complies with the above requirements.
<u>Import Requirements</u>	When eligible, a U.S. Standard Airworthiness Certificate may be issued on the basis of an Export Certificate of Airworthiness signed by a representative of the AVIATION REGISTER containing the following statement:  "The IL-103 model aircraft covered by this certificate has been examined, tested, and found to conform to the type design approved under FAA Type Certificate A45CE and is found to be in a condition for safe operation."

Model IL-103 airplane serial numbers No. 0201 through 0415 are eligible for a U.S. Standard Airworthiness Certificate at a gross weight of 2530 lbs. (1150 kg.).

Model IL-103 aircraft with serial numbers No. 0201 through 0415 are eligible for a U.S. Standard Airworthiness Certificate at a maximum weight of 2880 lbs. (1310 kg.) provided they have been modified in accordance with Technical Bulletin No. 103-35 БУ/БЭ, Joint Stock Company "IL and if all import requirements of this TCDS are satisfied (See Note 6).

Model IL-103 airplane serial numbers No. 0501 and on, are eligible for a U.S. Standard Airworthiness Certificate 2880 lbs. (1310 kg.).

For prematurely imported IL-103 Airplanes serial numbers, a U.S. Standard Airworthiness Certificate may be used if, AVIATION REGISTER approved Ilyushin Aviation Complex service bulletin "U.S. Airworthiness Certification of "Prematurely" exported Airplanes" has been complied with, and if all other import requirements of this TCDS are satisfied.

Modifications pre-dating the issuance of this Type Certificate and not included in any of the above paragraphs of this note, and modifications dated after the issuance of this Type Certificate not covered by note contained in the Service Information paragraph of this Type Certificate must be assumed **NOT** to be approved under this Type Certificate.

#### Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the Airplane for certification. In addition, the following items of equipment are required:

##### 1. Basic equipment and instruments:

Day VFR:

- a) airspeed indicator (knots)
- b) altimeter (feet and pressure scale in inches of Hg)
- c) magnetic compass
- d) slip indicator
- e) safety harness

##### 2. IL-103 Flight Manual 10306-AFM, AVIATION REGISTER-approved dated November 10, 1998 or later AVIATION REGISTER approved revision.

#### Service Information

Service bulletins, structural repair manuals, vendor manuals, and overhaul and maintenance manuals, which contain a statement that the document is AVIATION REGISTER approved, are accepted by the FAA.

Aircraft Flight Manuals which contain a statement that the document is AVIATION REGISTER approved are considered to be approved by the FAA.

Available Documents for the Ilyushin Aviation Complex Model IL-103 series:

Airplane Flight Manual Number 10306-AFM, dated November 10, 1998, or later Aviation Register approved revisions.

Instructions for Continued Airworthiness (Maintenance Manual) Number 10306-MM, (not yet accepted by the FAA) must be FAA accepted prior to airplane delivery or the issuance of the first standard airworthiness certificate, whichever occurs later, per 14 CFR Part 21.50.

Engine manual: Maintenance and Operator's Manual,  
Continental Aircraft Engine Model IO-360 Series, FAA accepted  
January 1994 (See Section 072.00.00 Number 10306-MM)

Propeller manual: Propeller Owners Manual and Log Book No.  
115N, Revision 3, FAA accepted January 1994  
(See Section 061.00.00 Number 10306-MM)

NOTES:

- NOTE 1. Current weight and balance data including list of equipment included in the certificated empty weight, and loading instructions, when necessary, must be provided for each airplane at the time of original certification, and remain with the airplane at all times thereafter. The certificated empty weight and corresponding center of gravity locations must include the following:
- Unusable fuel of 8.8 lbs (4 kg), 1.5 U.S. gal (5.70 liters)
- NOTE 2. Airplane operation must be in accordance with the Aviation Register approved Airplane Flight Manual listed above. All placards listed in Section 2 must be displayed in clear view of the pilot.
- NOTE 3. Airworthiness Limitations are specified in the OPERATING LIMITATIONS section of the Flight Manual and the Instructions for Continued Airworthiness (Maintenance Manual), dated May 20, 1998 and are FAA approved. These LIMITATIONS specify mandatory replacement times, and operating limitations and may not be changed without FAA approval.
- Night flying is prohibited.
- Outside temperature at start and take-off:
- Maximum: 99° F ( +37° C)  
Minimum: 0° F ( -18° C)
- Load Factor :      Positive +4.4g  
                              Negative -1.80g
- Flight duration not more than 5 seconds at negative load factor
- Maximum Operating Altitude without O<sub>2</sub> equipment: 10,000 feet (3000 meters)  
Maximum Take-off Field Elevation 8,000 feet (2440 meters)
- The airplane life limits are:
- Utility Category: 12,000 flight hours, or 15 years.
- Airworthiness Limitations are contained in Chapter 5 of the IL-103 Maintenance Manual. Revisions to the Airworthiness Limitations must be approved by the FAA. The inspections, maintenance, repair and painting must be accomplished according to the Maintenance Manual or other procedures acceptable to the FAA.
- NOTE 4. Information essential for the proper operation, maintenance and Inspection of the airplane is contained in the Model IL-103 Flight Manual and Maintenance Manual.

NOTE 5. All avionics installed in this aircraft must meet the applicable FAA Technical Standard Order (TSO) and/or equivalent FAA approved safety requirements.

NOTE 6. The gross weight of airplanes with serial numbers 0201 through 0415 can be increased to 2880 lbs. (1310 kg.) if modified in accordance with Ilyushin Bulletin No. 103-35 БУ/БЭ, Joint Stock Company "IL".

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