

**MINISTÉRIO DA AERONÁUTICA
DEPARTAMENTO DE PESQUISA E DESENVOLVIMENTO
CENTRO TÉCNICO AEROESPACIAL**

CERTIFICATE DATA SHEET No EA-9002

This data sheet, which is part of Type Certificate No. 9002 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Brazilian Aeronautical Regulations.

CERTIFICATE HOLDER

Witwórnia Sprzetu Komunikacyjnego
PZL - MIELEC
Ul. Ludowego Wajnska Polskiego 3 - 39300 - MIELEC - POLAND

EA-9002
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WSK-PZL-MIELEC
AN-2T AN-2TD AN-2P
FEB 1992

I - AN-2T (CARGO ONLY)/AN-2TD (PRIVATE TRANSPORT/PARACHUTING)/AN-2P (PUBLIC TRANSPORT) - NORMAL CATEGORY AIRCRAFT - APPROVED JUNE 20, 1990.

ENGINE 1 (one) WSK "PZL-KALISZ" AS₂ - 62IR-16, supercharged, nine cylinders, radial, air cooled, reduction gear ratio; 0,687/1 (CTA Type Certificate CHT-8903).

FUEL Aviation gas- 91 octanes minimum grade.

OIL Aeroshell W100 (see also the Brazilian Airplane Flight Manual)

<u>ENGINE LIMITS</u>	SHP <u>(hp)</u>	RPM <u>_____</u>	MAP <u>(in Hg)</u>	ALTITUDE <u>(ft)</u>
Takeoff (5 min)	967	2200	41.3	Sea level
Max. Cont.	793	2100	35.4	Sea level
Max. Cont.	812	2100	35.4	5000

PROPELLER 1 (one) WSK "PZL - Warszawa"AW2, four blades, constant speed, metallic, nominal diameter 3.6m (CTA Type Certificate CHT 8902).

AIRSPPEED LIMITS (IAS) Km/h (knots)

V _{NE} (never exceed)	270 (146)
V _{NO} (max structr. cruising)	215 (116)
V _A (maneuvering)	198 (107)
V _{FE} (max flaps extended)	150 (81)

MAXIMUM WEIGHTS **Kg (lbs)**

Takeoff	5500 (12125)
Landing	5250 (11575)

C.G. RANGE % MAC (m from datum)

Front Limit 20% (0.504m) at 5500 kg to,
 18.2% (0.463m) at 5050 kg to,
 17% (0.436m) at 3950 kg and less.
 Straight line variation between points given.

Rear Limit 30% (0.731m) at 5500 kg to,
 28.2% (0.690m) at 4600 kg to,
 24.3% (0.601m) at 3500 kg and less.
 Straight line variation between points given.

EMPTY WEIGHT CG RANGE None.

DATUM Rear surface of bulkhead n^o. 5 (which separates cockpit from cabin)

MAC 2.269 m.

MAC LEADING EDGE 0.05 m aft of datum

LEVELING MEANS Two red painted rivets on frames 4 and 22 of LH and RH of fuselage (for theodolite leveling).

MINIMUM CREW Two pilots (at - 0.336 m).

MAX OCCUPANCY 11 retractable lateral seats (AN-2TD) or 11 forward facing seats (AN-2P). See Brazilian approved Flight Manual for arms.

MAX BAGGAGE

baggage rack rated to 40 kgf (at +3,200 m) on the RH of the fuselage between frames 12 and 13 (AN-2TD & AN-2P models)

baggage rack rated to 60 kgf (at +2,720 m) on the LH of the fuselage between frames 10 and 12 (AN-2P model).

MAX CARGO**AN-2T MODEL**

Max. distributed load 1000 kgf/m²

Max. load on fuselage compartment (1) - between frames 5 and 8. 1500 kgf (at + 0.648 m)

Max. load on fuselage compartment (2) - between frames 8 and 11. 700 kgf (at + 2.095 m)

Max. load on fuselage compartment (3) - between frames 11 and 15. 300 kgf (at + 3.460 m)

FUEL CAPACITY

1200 ± 48 l total (at + 0.944 m).

7.0 l unusable (3.5 l/wing tank).

OIL CAPACITY

120 ± 4 l (at - 1.586 m).

35 l unusable.

CONTROL SURFACE MOVEMENTS

aileron with flaps retracted -

up 30° (+1°; -1.5°)

down 14° (+1°; -1.5°)

aileron with flaps 30°

up 13,5° (+1°; -1.5°)

down 26° (+1°; -1.5°)

aileron trim tab

up and down 24° (+5°; -1°)

elevator

up 42° (+3°; -0°)

down 22.5° (+1°; -1°)

elevator trim tab

up and down 14° (+1°; -1°)

rudder	right and left 28° (+1°; -2°)
rudder trim tab	right and left 14° (+1°; -1°)
flap (upper and lower wing)	down 30° (+0°; -1°)

EQUIPMENT

The basic required equipment as described in the applicable airworthiness regulations (see certification basis) must be installed in the airplane for certification.

The specification of the basic equipment which shall be installed in the aircraft for Brazilian certification is defined by WSK doc 07/90 CACA approved, dated June 1990. The specification of the optional equipment which may be installed in the aircraft and accepted for Brazilian certification is defined by WSK document 08/90, CACA approved, dated June 1990.

In addition, the Brazilian Airplane Flight Manual doc OLR-7/04/90 whose original issue was CACA approved on March 90, must be on board of the aircraft at all times.

**SERIAL NUMBERS
ELIGIBLE**

All aircraft S/N when in compliance with the Brazilian requirements for acceptance of the WSK AN-2T, AN-2TD and AN-2P aircraft established in the CTA report H10-1000/1001, revision 2 dated November 30, 1988 or subsequent.

IMPORT REQUIREMENTS

A Brazilian Airworthiness Certificate may be issued on the basis of the Polish Central Administration for Civil Aviation (CACA) Export Certificate of Airworthiness signed by a CACA representative and containing the following statement: "The airplane covered by this certificate has been examined and found to conform to the Brazilian approved type design under Type Certificate N°. 9002, and to be in condition for safe operation".

CERTIFICATION BASIS

RBHA 21.29 and RBHA 23 equivalent to the US FAR 23 original issue, with the exceptions listed on doc WSK N°. 10/90 - NON COMPLIANCE WITH THE US FAR's - approved by CACA and accepted by the CTA. Equivalent safety findings in respect to FAR 23.1545 (a);

airspeed indicator marked with indicated airspeed, FAR 23.777 (d) & 23.781; position and shape of flap controls, and FAR 23.1191 (c); fireproof grommets and bushings not installed in the firewall, compensated by the installation of fire-detection and fire-extinguishing systems in the engine nacelle area.

NOTES

1. Approved as a FAR 23 normal category aircraft for the following limit maneuvering load factors:
 - with flaps up - +3.2; -1.28
 - with flaps down - +2.0; -0.
2. All placards listed on CTA report H10-1000/1001 rev 2 or subsequent shall be installed in the appropriated locations.
3. Maintenance of this aircraft shall be performed in accordance with the following documentation:
 - Schedule of Periodic Inspections Manual, vols 1 & 2, rev 2 or subsequent, approved by CACA on March 27, 90.
 - Service and Maintenance Instruction Manuals
 - Vol I, rev 9 or subsequent (March 15, 90).
 - Vol II, rev 9 or subsequent (June 08, 90).
 - Vol III, rev 5 or subsequent (April 11, 90).
 - Vol IV, rev 2 or subsequent (November 05, 88).
4. Repair Manual, revision 2 or subsequent, approved March 08, 90.

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Brig do Ar - ADYR DA SILVA
Diretor Interino do CTA