



2. Additional instruments for cloud flying:
  - a) All instruments listed above
  - b) Turn and bank indicator or artificial horizon.
3. Flight Manual approved by CTA.

II - MODEL SZD-48-3 "JANTAR STANDARD 3" (Normal Category and Semi-Acrobatic), approved September 03, 1986.

C. G. RANGE 141mm to 330mm without water ballast  
141mm to 274,5mm with water ballast

EMPTY WEIGHT  
C. G. RANGE 500mm to 540mm from datum

MAXIMUM WEIGHT 390 kgf without ballast  
540 kgf with ballast

PILOT'S WEIGHT Minimum: 55 kgf for positions 1 thru 3  
of the back-rest.  
Maximum: 110 kgf  
For necessary ballast see Flight Manual  
(page 15a)

CONTROL SURFACE	up	down
DEFLECTIONS		
Elevator	$(32 \pm 1)^\circ$	$(18 \pm 1)^\circ$
Ailerons	$(27 \pm 2)^\circ$	$(16 \pm 2)^\circ$
Air brake	$(122 \pm 5)\text{mm}$	$(118 \pm 5)\text{mm}$
Rudder	$(29 \pm 1)^\circ$ to the right or left	

REQUIRED EQUIPMENT The basic required equipment prescribed in the applicable airworthiness regulations and listed in the Flight Manual must be on board or installed in the sailplane. Particularly, the following equipment must be installed for compliance with the Brazilian regulations (RBHA):

1. Instruments for visual flight condition:
  - a) Airspeed indicator
  - b) Altimeter
  - c) Compass
  - d) Variometer
2. Additional instruments for cloud flying:
  - a) All instruments listed above
  - b) Artificial horizon.
3. Flight Manual approved by CTA.

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COMMON DATA FOR ALL MODELS:

AIRSPPEED LIMITS  
(INDICATED)

Never exceed ( $V_{NE}$ ):  
285 km/h (157 kts)

Maximum gust ( $V_B$ ):  
200 km/h (110 kts)

Maximum maneuvering ( $V_A$ ):  
170 km/h (92 kts)

Maximum aerotow ( $V_T$ ):  
150 km/h (81 kts)

Maximum winch launching ( $V_W$ ):  
125 km/h (67 kts)

Maximum air brake operation speed:  
. for smooth air: 285 km/h (154 kts)  
. for gusty air : 200 km/h (108 kts)

Maximum landing gear operation speed  
( $V_{LO}$ ): 250 km/h (135 kts)

DATUM

Leading edge of the wing at wing root rib.

LEVELING MEANS

Wing trailing edge 22,0mm lower than the wing leading edge, at the plane of wing fuselage junction.

NUMBER OF SEATS

One adjustable seat.

FIXED BALLAST

None.

WATER BALLAST

Two water ballast tanks at wing's root with 75l capacity each one.

MAXIMUM BAGGAGE

25 kgf (see Flight Manual)

MAXIMUM CABLE TENSION  
FOR AEROTOW OR WINCH  
LAUNCHING

(690 ± 69) kgf

CERTIFICATION BASIS

RBHA 1111/01, december 15, 1976, chapter 7 and 10.

It was found that the OSTIV Requirements ("Organisation Scientifique et Technique International du Vol a Voile") used in the original certification are equivalent to the Brazilian Requirements for sail-planes including revision dated June, 1977.

Special Condition, section P, chapter P.6, item 2.1 - Instruments, revision dated June 1977 of the RBA for the model JANTAR STANDARD 2; and Special Condition, section 2.2 - Instruments, RBHA 1330 revision dated March 15, 1987, for the JANTAR STANDARD 3.

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Type Certificate nº 8004, issued June 20, 1980 for the model SZD-48-1 "JANTAR STANDARD 2" and re-issued September 3, 1986, for the model SZD-48-3 "JANTAR STANDARD 3".

The applications for Brazilian Certification are dated June 22, 1979 for model SZD-48-1 "JANTAR STANDARD 2", and April 15, 1986 for model SZD-48-3 "JANTAR STANDARD 3".

Validation:

The Type Certificate nº 8004 was issued in accordance with section 10.2 of the RBHA 1111/01 in validation of the Type Certificate issued by the "Civil Aircraft Inspection Board/IKCSP/of Polish People Republic" in the basis of the OSTIV - Airworthiness Regulations for Sailplanes dated September, 1976.

IMPORT REQUIREMENTS

One Brazilian Airworthiness Certificate will be issued in the basis of the Ex-port Certificate of Airworthiness issued by the Civil Aircraft Inspection Board/IKCSP/of Polish People Republic" including the following statement:

"The glider covered by this Certificate has been examined, tested and found to comply with the Type Design approved by the Type Certificate nº 8004 issued by the CTA and is in good condition for safe operation".

NOTE 1

A weight and balance report listing all equipment included in the empty weight must be delivered with each sailplane including loading instructions, if considered necessary.

NOTE 2

A. The following inscriptions and placard must be installed in clear view of the pilot:

A.1 For model SZD-48-1 "JANTAR STANDARD 2":

1. Airspeeds placard:

Velocidades máximas (indicadas)	km/h	kts
Em ar calmo (VNE).....	285	154
Em turbulência (VB).....	200	108
De manobra (VA).....	170	92
De reboque por avião (VT).....	150	81
De lançamento por guincho (VW).....	125	67
(vento de proa máximo 23,3 nós)		
De operação com freios aerodinâmicos estendidos.....	285	154

	km/h	kts
De operação do trem-de-pouso (VLO)...	250	135
Velocidade inicial para:		
. Espiral.....	130	70
. "Looping" e "stall-turn".....	200	108
. "Quick half-roll-half-loop".....	95	51

2. Operation Limits Placards:

1. Operações Proibidas:

- . Vôos noturnos;
- . Parafusos com lastro de água;
- . Manobras acrobáticas com lastro de água.

2. For sailplane not equipped with the instruments required for cloud flying the following additional placard must be installed:

"PROIBIDO VÔO EM NUVENS"

3. Weight placard:

- . Peso vazio..... 265 kgf
  - . Peso máximo sem lastro de água.... 385 kgf
  - . Peso máximo com lastro de água.... 535 kgf
- (Para carregamento ver Manual de Vôo)

4. Others:

1. Above main wheel:
 

"2 kgf/cm<sup>2</sup> (28,4 psi)"
2. Above tail wheel:
 

"1,5 kgf/cm<sup>2</sup> (21,3 psi)"

A.2 For model SZD-48-3 "JANTAR STANDARD 3":

1. Airspeeds placard:

Velocidades máximas (indicadas)	km/h	kts
Em ar calmo (V <sub>NE</sub> ).....	285	154
Em turbulência (V <sub>B</sub> ).....	200	108
De manobra (V <sub>A</sub> ).....	170	92
De reboque por avião (V <sub>T</sub> ).....	150	81
De lançamento por guincho (V <sub>W</sub> ).....	125	67
De operação com freios aerodinâmicos estendidos.....	285	154
De operação do trem-de-pouso (V <sub>LO</sub> )..	250	135
Velocidade inicial para:		
. Espiral.....	130	70
. "Looping" e "Renversement".....	200	108
. "Retournement" rápido.....	95	51
. "Retournement" lento.....	180	97

2. Operation Limits Placards:

1. Operações proibidas:

- . Vôos noturnos;
- . Parafusos com lastro de água;
- . Manobras acrobáticas com lastro de água.

2. For sailplane not equipped with the instruments required for cloud flying the following additional placard must be installed:

"PROIBIDO VÔO EM NUVENS"

3. Weight placard: Limite de peso:

. Peso vazio..... 270 kgf  
 . Carga paga máxima..... 120 kgf  
 . Peso máximo sem lastro de água..... 390 kgf  
 . Peso máximo com lastro de água..... 540 kgf

Peso na Cabine do Piloto	Peso no Painel de Instrumentos	Cargas no Compartimento Dianteiro	Carga no Compartimento Traseiro
(55 a 65) kgf com encosto na posição 1-3	máximo 4 kgf	máximo 25 kgf	Máximo 5,5 kgf Para cada 1,2 kgf de carga no compartimento traseiro colocar uma placa (0,9 kgf ) de lastro no painel de instrumentos.
(65 a 70) kgf	máximo 4 kgf	máximo 25 kgf	Máximo de 10 kgf Para cada 2,25 kgf de carga no compartimento traseiro colocar uma placa (0,9 kgf ) de lastro no painel de instrumentos.
(70 a 110) kgf	máximo 4 kgf	máximo 25 kgf	máximo 10 kgf

4. Towing-hook:

Gancho dianteiro para reboque com desligador automático  
 Localization: near of the control.

5. Others:

1. Above main wheel:  
"2 atm/0,2 MPa/28,4 lb/pol<sup>2</sup>".
2. Above tail wheel:  
"1,5 atm/0,15 MPa/21,3 lb/pol<sup>2</sup>".

B. Markings (applies to boths models):

B.1 The secondary controls and/or handles, such as: the release mechanism; opening and jettisoning of the canopy; undercarriage; air brakes; trim tab; ventilation; water ballast jettisoning, as well as, pedals; must be equipped with unmistakable signs indicating its functions properly.

B.2 The airspeed limits must be marked in the airspeed indicator in accordance with the Flight Manual.

NOTE 3

The inspection, maintenance, repair and painting must be performed in accordance with the instructions shown in the Repair Manual issue I, 1978 and the Maintenance Manual - issue I, November 1978 for SZD-48-1 "JANTAR STANDARD 2".

For the SZD-48-3 "JANTAR STANDARD 3" the Repair Manual and Maintenance Manual, in portuguese, approved by the CTA.

NOTE 4

For external surfaces painting use only paints obtained using the mixture of two components listed in the corresponding Manual.

NOTE 5

The life limit of the sailplane is 3000 operational hours.

NOTE 6

The flight in high altitude (above 3048m (10000 fts) is permitted only if there is installed one approved oxygen system.

Original in Portuguese signed by:

JOSÉ ANTONIO ROSA DOS SANTOS - Ten Cel Av  
Vice-Diretor de Homologação e Padrões

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