

# Declaration of Design and Performance (Acceptable Means of Compliance)

DDP No 64.001.027a  
Issue No 01

## 1 Name and address of manufacturer.

Aerodyne Systems  
29 Duiker Road, Canelands  
4340 Verulam, Natal  
South Africa

## 2 Description and identification of article including:

a) "Solo" Main Canopy for 1 Person, Type No P1497, sizes 230 sq ft to 270 sq ft

Description of Canopy: SOLO 9-cell main canopy

Type of canopy	Main ram-air canopy, semi-elliptical planform
Cells	9
Construction	I-beam chordwise
Connector links	Rapide-link #4
Canopy Material	Zero porosity 1.1 oz. Ripstop nylon, Silicone coated for top, F-111 for ribs and bottom skins
Lines	Spectra 725 lbs, Dacron 600 lbs

Parts List of Solo canopy:

Canopy size	Assembly	Canopy	Slider	Link
230	P1497-00	P1497-01	P1497-02	#4 Rapide link
250	P1497-10	P1497-11	P1497-02	#4 Rapide link
270	P1497-20	P1497-21	P1497-02	#4 Rapide link

b) Modification Standard Current revision shown on warning label

c) Master drawing record: DRAWING SCHEDULE – DO-004

d) Weight and overall dimensions:

Size sq.ft.	Span in ft	Chord ctr in ft	Chord tip	Canopy Weight in kg	Slider size in mm
230	24,03	8,38/9,85	8,38	3,37	750 X 650
250	25,05	8,74/10,27	8,74	3,52	750 X 650
270	26,03	9,08/10,67	9,08	3,66	750 X 650

Note: Slider dimensions are for cutting templates with a margin of +0 to -30 mm.

Control System measured with brake locking loop held to the same point as the connector link. Aerodyne soft link is assumed. All measurements in centimeters.

Size	Suspension lines	A lines	B lines	C lines	D lines	Lower steering lines		Upper steering lines	
230	lines 3 to 8	3963	4012	4219	4483	toggle to brake	503	line 1	1191
	lines 2 & 9	3962	4006	4200	4447	brake to cascade	3131	line 3	1233
	lines 1 & 10	3962	3996	4164	4372			line 4	1302
								line 5	1510
Size	Suspension lines	A lines	B lines	C lines	D lines	Lower steering lines		Upper steering lines	
250	lines 3 to 8	4156	4206	4423	4697	toggle to brake	524	line 1	1242
	lines 2 & 9	4154	4201	4403	4660	brake to cascade	3288	line 3	1285
	lines 1 & 10	4151	4190	4365	4582			line 4	1357
								line 5	1574
Size	Suspension lines	A lines	B lines	C lines	D lines	Lower steering lines		Upper steering lines	
270	lines 3 to 8	4341	4393	4618	4903	toggle to brake	545	line 1	1290
	lines 2 & 9	4339	4387	4597	4864	brake to cascade	3439	line 3	1335
	lines 1 & 10	4339	4377	4558	4783			line 4	1410
								line 5	1636

**3 Specification reference, i.e., JAR-TSO No. and Manufacturer's design specification.**

This product is designed for use as a main parachute for 1 Person during intentional jumping with a single harness-container system.

**4 The rated performance of the article directly or by reference to other documents.**

Max. Suspended weight:	See 9.A) Load
Max. Opening speed:	130 KT
Max. Sink speed/Rate of descent	<7m/sec
Max. Repack Cycle:	3 Month

**5 Particulars of approvals held for the equipment:**

No approvals other than that of the manufacturer.

**6 Reference to qualification test report.**

Extensive factory testing has been performed by the manufacturer on all models of the SOLO canopy. These tests consisted mainly of life jumps from various altitudes and with

different persons and suspended weights. All test jumps have been recorded in writing and most on video as well. All SOLO canopies have passed the factory testing with satisfactory results.

**7 Service and Instruction Manual reference number.**

Aerodyne Main Canopies Manual, edition of January 2004, attached as Annex, or a following current revision (available for download via [www.aerodyne-int.com](http://www.aerodyne-int.com)).

**8 Statement of compliance with appropriate JAR-TSO and any deviations therefrom.**

None.

**9 (a) Statement of the level of compliance with the JAR-TSO in respect of the ability of the article to withstand various ambient conditions or to exhibit various properties.**

Parachute canopy is built with commonly used materials and will withstand normal use in typical civilian environment.

**(a) Working and ultimate pressure or loads.**

Canopy Size	Minimum Exit Weight	Maximum Exit Weight (kg.)					
		Student	Novice	Int.	Adv.	Expert	Max
230	42	94	94	105	136	136	136
250	45	102	102	114	136	136	136
270	49	110	110	123	136	136	136

N/S = Not Suggested

Minimum exit weights are calculated on a 0,4 lbs/sq ft wing loading.

**(b) Limitations of voltage and frequency.** Not applicable

**(c) Time rating (e.g. continuous, intermittent) or duty cycle.**  
The service/operational life is not regulated

**(d) Limits of accuracy of measuring instruments.**  
No measurements needed

**(e) Whether the equipment is "flameproof" (explosion-proof).**  
The equipment is not flameproof

**(f) Whether the equipment is "fire-resistant".**  
The equipment is not fire resistant

**(g) The compass safe distance.** N/A (not applicable)

**(h) Level of radio interference.** N/A (not applicable)

**(j) Radio and audio frequency susceptibility.** N/A (not applicable)

**(k) Degree of vibration which the equipment will withstand.** N/A (not applicable)

**(l) Degree of acceleration and shock which the equipment will withstand.** N/A (not applicable)

**(m) Degree of waterproofing or sealing of equipment.**

The equipment is not waterproof or sealed.

**(n) Ability to withstand sand and dust.**

The equipment is not sensitive to sand and/or dust

**(o) Ability to resist salt spray and aircraft fluids.**

The equipment should not be exposed to Solenspray and/or aircraft fluids of any type. Should it be necessary to remove such soil, information as to the appropriate procedures is provided in the operations manual.

**(p) Fungus resistance.**

The equipment is manufacturer exclusively from synthetic materials and consequently resistant to fungus

**(q) Temperature and altitude category.**

The related materials and consequently the equipment can be used in a temperature range from -40° to +200°F

**(r) Humidity category.**

**(s) Any other known limitations which may limit the application in the aircraft e.g. restrictions in mounting attitude.**

(NOTE: The “categories” referred to are those listed in the current issue of EUROCAE ED-14/ RTCA document DO-160).

**10 A statement of criticality of software.**

No software in parachute.

**11. The declaration in this document is made under the authority of Aerodyne Research Corporation. Aerodyne cannot accept responsibility for equipment used outside the limiting conditions stated above without their agreement.**

**Date: 17.11.2004**

**Signed:**

Aerodyne Research Corp.

Arnold Collenteur  
Sales Director