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

DDP No 64.001.022a
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) "Pilot" Main Canopy for 1 Person, Type No P-1496, sizes 124 sq ft to 210 sq ft

Description of Canopy: Pilot 9-cell main canopy

| | |
|---|---|
| Type of canopy | Main ram-air canopy, elliptical planform |
| Cells | 9 |
| Construction | I-beam chordwise |
| Connector links | Aerodyne soft links |
| Canopy Material | Zero-porosity nylon ripstop fabric for top and bottom skins, F-111 for ribs |
| Lines | Spectra 725 lbs |

Parts List of Pilot canopy:

| Canopy size | Assembly | Canopy | Slider | Softlinks |
|---|---|---|---|---|
| 124 | P-1496-00 | P-1496-01 | P-1496-02 | P-1487 |
| 132 | P-1496-10 | P-1496-11 | P-1496-02 | P-1487 |
| 140 | P-1496-20 | P-1496-21 | P-1496-02 | P-1487 |
| 150 | P-1496-30 | P-1496-31 | P-1496-02 | P-1487 |
| 168 | P-1496-40 | P-1496-41 | P-1496-02 | P-1487 |
| 188 | P-1496-50 | P-1496-51 | P-1496-52 | P-1487 |
| 210 | P-1496-60 | P-1496-61 | P-1496-52 | P-1487 |

b) Modification Standard Current revision shown on warning label

c) Master drawing record: P-1496

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 |
|---|---|---|---|---|---|
| 124 | 17,64 | 7,23 | 6,15 | 2,48 | 745x529mm |
| 132 | 18,20 | 7,46 | 6,35 | 2,56 | 745x529mm |
| 140 | 18,74 | 7,68 | 6,54 | 2,63 | 745x529mm |
| 150 | 19,40 | 7,95 | 6,77 | 2,73 | 745x529mm |
| 168 | 20,53 | 8,42 | 7,16 | 2,88 | 745x529mm |
| 188 | 21,72 | 8,90 | 7,58 | 3,05 | 773x569mm |
| 210 | 22,95 | 9,41 | 8,01 | 3,22 | 773x569mm |

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 | |
|---|---|---|---|---|---|---|---|---|---|
| 124 | lines 3 to 8 | 2706 | 2741 | 2891 | 3081 | toggle to brake | 390 | line 1 | 860 |
| | lines 2 & 9 | 2705 | 2737 | 2877 | 3055 | brake to cascade | 2105 | line 3 | 890 |
| | lines 1 & 10 | 2705 | 2730 | 2851 | 3001 | | | line 4 | 940 |
| | | | | | | | | line 5 | 1090 |
| Size | Suspension lines | A lines | B lines | C lines | D lines | Lower steering lines | | Upper steering lines | |
| 132 | lines 3 to 8 | 2838 | 2875 | 3032 | 3231 | toggle to brake | 409 | line 1 | 902 |
| | lines 2 & 9 | 2837 | 2871 | 3017 | 3204 | brake to cascade | 2208 | line 3 | 933 |
| | lines 1 & 10 | 2837 | 2863 | 2990 | 3147 | | | line 4 | 986 |
| | | | | | | | | line 5 | 1143 |
| Size | Suspension lines | A lines | B lines | C lines | D lines | Lower steering lines | | Upper steering lines | |
| 140 | lines 3 to 8 | 2923 | 2961 | 3123 | 3328 | toggle to brake | 421 | line 1 | 929 |
| | lines 2 & 9 | 2922 | 2956 | 3108 | 3300 | brake to cascade | 2274 | line 3 | 961 |
| | lines 1 & 10 | 2922 | 2949 | 3079 | 3241 | | | line 4 | 1015 |
| | | | | | | | | line 5 | 1177 |
| SIze | Suspension lines | A lines | B lines | C lines | D lines | Lower steering lines | | Upper steering lines | |
| 150 | lines 3 to 8 | 3025 | 3065 | 3232 | 3445 | toggle to brake | 426 | line 1 | 962 |
| | lines 2 & 9 | 3024 | 3060 | 3217 | 3416 | brake to cascade | 2353 | line 3 | 995 |
| | lines 1 & 10 | 3024 | 3052 | 3188 | 3355 | | | line 4 | 1051 |
| | | | | | | | | line 5 | 1219 |
| Size | Suspension lines | A lines | B lines | C lines | D lines | Lower steering lines | | Upper steering lines | |
| 168 | lines 3 to 8 | 3221 | 3262 | 3441 | 3667 | toggle to brake | 444 | line 1 | 1024 |
| | lines 2 & 9 | 3220 | 3258 | 3424 | 3636 | brake to cascade | 2505 | line 3 | 1059 |
| | lines 1 & 10 | 3220 | 3249 | 3393 | 3572 | | | line 4 | 1119 |
| | | | | | | | | line 5 | 1297 |
| Size | Suspension lines | A lines | B lines | C lines | D lines | Lower steering lines | | Upper steering lines | |
| 188 | lines 3 to 8 | 3405 | 3449 | 3638 | 3877 | toggle to brake | 462 | line 1 | 1082 |
| | lines 2 & 9 | 3404 | 3444 | 3620 | 3844 | brake to cascade | 2649 | line 3 | 1120 |
| | lines 1 & 10 | 3404 | 3435 | 3587 | 3776 | | | line 4 | 1183 |
| | | | | | | | | line 5 | 1372 |

| Size | Suspension lines | A lines | B lines | C lines | D lines | Lower steering lines | | Upper steering lines | |
|---|---|---|---|---|---|---|---|---|---|
| 210 | lines 3 to 8 | 3580 | 3626 | 3824 | 4076 | toggle to brake | 481 | line 1 | 1138 |
| | lines 2 & 9 | 3578 | 3621 | 3806 | 4041 | brake to cascade | 2785 | line 3 | 1177 |
| | lines 1 & 10 | 3578 | 3611 | 3772 | 3970 | | | line 4 | 1244 |
| | | | | | | | | line 5 | 1442 |

**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: | One year |

**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 Pilot 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 Pilot canopies have passed the factory testing with satisfactory results.

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

Aerodyne Main Canopies Manual, edition of January 2003, attached as Annex, or a following current revision (available for download via 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 (lbs.) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Student | Novice | Int. | Adv. | Expert | Max |
| 124 | 50 | N/S | N/S | 136 | 161 | 198 | 198 |
| 132 | 53 | N/S | N/S | 145 | 172 | 211 | 211 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 140 | 56 | N/S | N/S | 154 | 182 | 224 | 224 |
| 150 | 60 | N/S | N/S | 165 | 195 | 240 | 240 |
| 168 | 67 | N/S | N/S | 185 | 218 | 269 | 269 |
| 188 | 75 | 169 | 169 | 207 | 244 | 301 | 301 |
| 210 | 84 | 189 | 189 | 231 | 273 | 336 | 336 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

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:** **July 1st, 2003**

**Signed:**

Aerodyne Technologies S.A.

Arnold Collenteur
Sales Director