

Declaration of Design and Performance (Acceptable Means of Compliance)

DDP No 64.001.021a
Issue No 01

1 Name and address of manufacturer.

Aerodyne Research Corporation
5613 Interbay Boulevard
Tampa, FL 33611
USA

2 Description and identification of article including:

a) "Smart" Reserve Canopy for 1 Person, Type No P-1482-00 to P-1482-80 + P-1483-00, sizes 99 sq ft to 250 sq ft

Description of Canopy: Smart 7-cell canopy

Type of canopy	Square Reserve canopy, not shaped
Cells	7
Construction	I-beam chordwise
Connector links	Aerodyne soft links or stainless steel Maillon Rapide connector link
Canopy Material	0-3 cfm nylon ripstop fabric
Lines	Spectra 725 lbs

Parts List of Smart canopy:

Canopy Part #: P-1482-01 to P-1482-81 and P-1483-01

Slider Part #: P-1482-02 to P-1482-82 and P-1483-02

Connector (Soft) Links Part #: P-1487-1

b) Modification Standard Current revision shown on warning label

c) Master drawing record: P-1482-00 to P-1482-80 and P-1483-00

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
99	14,11	7,02	7,02	1,5	620x380
110	14,83	7,38	7,38	1,7	640x400
120	15,59	7,71	7,71	1,8	670x420
135	16,40	8,14	8,14	1,9	720x438
150	17,32	8,63	8,63	2,0	780x480
160	17,82	8,86	8,86	2,1	780x480
175	18,67	9,28	9,28	2,2	780x480
190	19,46	9,68	9,68	2,4	780x555
220	20,90	10,40	10,40	2,7	780x555
250	22,80	10,93	10,93	3,0	816x515

Control System measured with brake locking loop held to the same point as the connector link. 3.5 stainless steel Maillon Rapide connector link is assumed. All measurements in centimeters.

Size	A	B	C	D	Brake- Toggle	Brake-Trailing Edge
99	238	242	256	278	29	272
110	250	254	268	290	30	283
120	260	264	281	304	32	295
135	277	281	298	323	35	313
150	292	297	316	340	38	328
160	300	305	324	350	39	340
175	315	320	339	367	41	352
190	328	333	353	382	41	367
220	341	347	367	397	42	382
250	374	383	402	431	79	417

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

This product is designed for use as a reserve parachute for 1 Person during intentional jumping with a single harness-container system. It is approved under the FAA TSO-C23D by letter of 17 December 2002.

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

Max. Suspended weight:	See 9.A) Load
Max. Suspended opening speed:	150 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.

See the TSO C23d approval letter of 17 December 2002

7 Service and Instruction Manual reference number.

Smart Reserve Manual TM/159, edition of January 2003 or a following current revision

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
99	40	N/S	N/S	99	129	129	220
110	44	N/S	N/S	110	143	143	220
120)	48	N/S	N/S	120	156	156	220
135)	54	N/S	N/S	135	176	176	220
150	60	N/S	N/S	150	195	195	264
160	64	160	160	160	208	208	264
175	70	175	175	175	228	228	264
190	76	190	190	190	248	247	264
220	88	220	220	220	264	264	264
250	100	250	250	250	300	300	300

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:

Signed: