

***Pilot***

***mamba***

***vision***

***Triathlon***

***Smart***

***Solo A2***

## MAIN CANOPY PACKING MANUAL





MAIN CANOPY PACKING MANUAL

TM

REVISED January 10

Mamba  
Vision  
Pilot  
Triathlon  
Solo  
A2  
SMART Reserve

PRIOR TO ASSEMBLY, PACKING OR USE OF THIS PRODUCT, READ AND FULLY UNDERSTAND THE CONTENT AND ALL WARNINGS CONTAINED IN THIS MANUAL, AND CAREFULLY FOLLOW ALL INSTRUCTIONS BEFORE AND DURING PACKING AND USING THE PARACHUTE SYSTEM

AERODYNE Research LLC 1405 Flight Line Blvd. Unit 20, Deland, FL 32724-2192  
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What is Aerodyne all about? It's pretty simple really, something of a mantra for our company:

## *Better Gear, Better Value, Better Skydives*

*Better Gear* has always been part of Aerodyne's DNA. We began with the do-it-all 7 cell, the Triathlon. We created the Smart Reserve, known around the world for superior quality. We created the Pilot, arguably the best-opening performance canopy on the market. With the Mamba, we've taken non-cross-braced elliptical canopy design to new performance highs. We developed a better cutaway system with the mini-force ring; even our hook knife outclasses the competition by a mile. "Better" really drives everything we do; as we develop innovative fabrics like zpX, as we bring out canopies like the Sensei and more A2 sizes, as we continue to improve an already outstanding Icon rig, we are following this mantra.

The second part is about providing *Better Value*. This is not necessarily about the lowest price, but about providing great value for money. We know our customers work hard and play hard and expect to get real value for the money they spend. Better products at comparable prices mean better value. Better customer service, provided by people who really know the equipment is also part of Aerodyne's commitment to better value.

The final part is about *Better Skydives*. We are a company owned and staffed by skydivers. We get it! Skydiving is fun, and the better your jumps, the more fun you have. We support this by not only making the best gear and providing the best value we can, but by taking our product out there. You'll see us at the DZ almost every weekend, jumping, load organizing, and generally having fun. We ask that our sponsored teams and individuals do the same, putting their time and energy into improving your skydives and your fun. That's why you skydive, and we're here to help.

## *The Aerodyne Team*

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# WARNING!

1. PROPER TRAINING AND/OR EXPERIENCE ARE REQUIRED TO LOWER THE RISK OF SERIOUS INJURY OR DEATH.

NEVER USE THIS PARACHUTE SYSTEM UNLESS YOU HAVE:

- A. READ THIS WARNING LABEL AND APPROPRIATE OWNERS MANUAL AND PACKING INSTRUCTIONS AND COMPLETED A "CONTROLLED PROGRAM OF INSTRUCTION" IN THE USE OF THIS PARACHUTE SYSTEM.
  - OR
  - B. READ THIS WARNING LABEL AND APPROPRIATE OWNERS MANUAL AND PACKING INSTRUCTIONS AND COMPLETED AT LEAST 100 RAM AIR PARACHUTE JUMPS.
2. LOWER THE RISK OF DEATH, SERIOUS INJURY, CANOPY DAMAGE AND HARD OPENINGS BY NEVER EXCEEDING THE MAXIMUM LIMITS

**MAXIMUM DEPLOYMENT SPEED:**

**### KTS**

**MAXIMUM EXIT WEIGHT:**

**### Lbs.**

(Jumper + Clothing + Equipment)

**MODEL & SIZE:**

**####**

**PART NUMBER:**

**####**

**SERIAL NUMBER:**

**####**

**DATE OF MANUFACTURE:**

**####**

**VERSION:**

**####**

HARD OPENINGS CAN CAUSE EQUIPMENT DAMAGE, SEVERE INJURY OR DEATH. PARACHUTE SYSTEMS SOMETIMES FAIL TO FUNCTION PROPERLY EVEN WHEN CORRECTLY ASSEMBLED, PACKED AND OPERATED. YOU RISK SERIOUS INJURY OR DEATH EACH TIME YOU USE THIS OR ANY PARACHUTE SYSTEM, BY DOING SO YOU WILL BE DEEMED TO HAVE EXPRESSLY AND IMPLIEDLY ASSUMED THIS RISK

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**REMOVAL OF THIS LABEL IS PROHIBITED AND VOIDS THE WARRANTY**  
MADE IN SOUTH AFRICA

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**DISCLAIMER; LIMITATION OF WARRANTY ON PARACHUTE; LIMITATION OF REMEDIES;  
WAIVER AND RELEASE OF WARRANTIES**

BY ACCEPTING AND USING THIS PARACHUTE, OR BY ALLOWING OTHERS TO USE IT, YOU CONFIRM THAT YOU UNDERSTAND THAT BECAUSE OF THE UNAVOIDABLE DANGER ASSOCIATED WITH THE USE OF THIS PARACHUTE, THE MANUFACTURER MAKES NO WARRANTY WHATSOEVER, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, EXCEPT A WARRANTY THAT A PARACHUTE OF SIMILAR DESIGN HAS BEEN PREVIOUSLY USED FOR PARACHUTE JUMPING. THE PARACHUTE IS SOLD, CONVEYED, LOANED, GIFTED, OR OTHERWISE DELIVERED, FURNISHED OR PROVIDED TO YOU BY THE MANUFACTURER, OR ON ITS BEHALF, AS IS, WITH ALL FAULTS, AND WITHOUT ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR USE.

THE MANUFACTURER EXPRESSLY DISCLAIMS ANY LIABILITY UNDER THE LAW, IN TORT OR OTHERWISE, FOR DAMAGES, DIRECT OR CONSEQUENTIAL, INCLUDING BUT NOT LIMITED TO DAMAGES FOR PERSONAL INJURIES, WRONGFUL DEATH, PROPERTY DAMAGE AND LOSS OF USE OF THE PARACHUTE, RESULTING FROM ANY MALFUNCTION OF THE PARACHUTE, OR FROM ANY DEFECT IN DESIGN, MATERIAL, WORKMANSHIP OR MANUFACTURE OF THE PARACHUTE, WHETHER CAUSED BY NEGLIGENCE ON THE PART OF THE MANUFACTURER, AND/OR BY ANY AND ALL MANUFACTURERS OF ANY AND ALL PARTS, ACCESSORIES, COMPONENTS, OR APPLIANCES MADE A PART OF, OR APPURTENANT TO, THE PARACHUTE.

YOU, BY YOUR USE OF THE PARACHUTE, AND/OR BY ALLOWING IT TO BE USED BY OTHERS, SPECIFICALLY WAIVE ANY LIABILITY ON THE PART OF THE MANUFACTURER FOR PERSONAL INJURIES, WRONGFUL DEATH, LOSS OF CONSORTIUM, PROPERTY DAMAGE AND LOSS OF USE OF THE PARACHUTE. YOU AGREE, AND HAVE MATERIALLY REPRESENTED TO THE MANUFACTURER, THAT YOU ARE A "HIGHLY SOPHISTICATED AND EXPERIENCED CONSUMER" WITH RESPECT TO THE PARACHUTE, AND THAT YOU ARE THOROUGHLY AWARE OF, AND EXPRESSLY ACCEPT, ANY AND ALL OF THE RISKS OF PHYSICAL INJURY, DEATH AND/OR PROPERTY DAMAGE WHICH MAY OCCUR AS A RESULT OF YOUR USE AND/OR MISUSE OF THE PARACHUTE DESIGNED BY, MANUFACTURED BY AND/OR RECEIVED FROM THE MANUFACTURER. AS A "HIGHLY SOPHISTICATED AND EXPERIENCED CONSUMER," YOU EXPRESSLY WAIVE ANY CLAIM YOU MIGHT OTHERWISE HAVE OF STRICT LIABILITY AGAINST THE MANUFACTURER.

THE WARRANTIES SET FORTH ABOVE, AND THE OBLIGATIONS AND LIABILITIES OF THE MANUFACTURER, AND YOUR REMEDIES THEREUNDER, ARE EXPRESSLY IN LIEU OF, AND YOU HEREBY WAIVE AND RELEASE THE MANUFACTURER FROM, ANY AND ALL OTHER WARRANTIES, AGREEMENTS, GUARANTEES, CONDITIONS, DUTIES, OBLIGATIONS, REMEDIES OR LIABILITIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THOSE ARISING FROM COURSE OF PERFORMANCE, DEALING, USAGE OR TRADE, WITH RESPECT TO

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**THE MANUFACTURER'S PERFORMANCE HEREUNDER, AND YOU AGREE THAT THE MANUFACTURER SHALL NOT BE LIABLE FOR ANY DAMAGE OR LOSS (INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES) SUFFERED BY YOU, DIRECTLY OR INDIRECTLY, BECAUSE OF ANY DEFECT IN THE PARACHUTE. NO AGREEMENT OR UNDERSTANDING VARYING, ALTERING OR EXTENDING THE MANUFACTURER'S LIABILITY HEREUNDER SHALL BE BINDING ON THE MANUFACTURER, UNLESS IN WRITING AND SIGNED BY A DULY AUTHORIZED REPRESENTATIVE OF THE MANUFACTURER, AND BY YOU OR YOUR DULY AUTHORIZED REPRESENTATIVE.**

**IF YOU DECLINE TO WAIVE LIABILITY ON THE PART OF THE MANUFACTURER, OR IF YOU DECLINE TO AGREE TO ALL OF THE TERMS OF THIS "DISCLAIMER – LIMITATION OF WARRANTY ON PARACHUTE; LIMITATION OF REMEDIES; WAIVER AND RELEASE OF WARRANTIES," YOU MAY OBTAIN A FULL REFUND OF THE PURCHASE PRICE BY RETURNING THE PARACHUTE, BEFORE IT IS USED, TO THE MANUFACTURER, WITHIN 15 DAYS FROM THE DATE OF YOUR RECEIPT OF THE PARACHUTE, WITH A LETTER STATING WHY IT WAS RETURNED.**

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## Canopy Selector

This canopy selector program is designed as a non-exclusive guide to selecting a canopy. It is designed to be used to assist you in finding an appropriate model and size of Aerodyne canopy for your exit weight, experience level and expectations. Please remember that in no way can this selector replace professional expert advice that is based upon firsthand knowledge of your current experience, skill level and frame of reference.

Only training, experience, currency and a healthy body and mind can reduce (but not eliminate) the risk to you of danger, serious bodily injury, or death. Regardless of your time in the sport, never hesitate to consult other more experienced or knowledgeable individuals. They are often happy to help you make appropriate decisions. At Aerodyne we recommend that, for both your main and reserve canopies, you choose a canopy suitable for your experience level, which you can land safely at your normal drop zone's field elevation, in no wind, in hot summer conditions, utilizing a normal straight in approach and progressive flare.

Please note that this selector is based upon exit weight and International Standard Atmosphere (ISA) conditions. Exit weight is body weight + equipment + clothing. ISA conditions are at Mean Sea Level (MSL) with a temperature of 15 degrees Celsius and 101,325 Pa (29.92"Hg). Canopy wing performance degrades at higher altitudes and with higher temperatures.

Aerodyne has developed an objective method to determine the degree of ellipticity of a canopy's planform. We have dubbed this value the "planform factor" (Pf). A higher planform factor equates to a greater degree of ellipticity and will likely exhibit the associated characteristics. Typically an elliptical canopy is more equally pressurized for better flight performance and exhibits better flare capability. Similarly the toggle pressure is usually lighter and the turn response is quicker. While these observations are not absolute, they are often typical of those exhibited by canopies with more elliptical planforms.

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Aerodyne Canopy Selector						
Exit Weight= jumper + clothing + equipment						
Canopy Model	Pf	Size ft <sup>2</sup>	Student/Novice Jumpers	Intermediate Jumpers	Advanced Jumpers	Maximum
Wing Loading lbs/ft <sup>2</sup> →					1.8 LBS KG	2.0 LBS KG
Mamba	22.1	90	Not recommended	Not recommended	162 74	180 82
	22.1	96	Not recommended	Not recommended	173 79	192 87
	22.1	104	Not recommended	Not recommended	187 85	208 95
	22.1	111	Not recommended	Not recommended	200 91	222 101
	22.1	117	Not recommended	Not recommended	211 96	234 106
	22.1	124	Not recommended	Not recommended	223 101	248 113
	22.1	132	Not recommended	Not recommended	238 108	264 120
	22.1	140	Not recommended	Not recommended	252 115	280 127
	22.1	150	Not recommended	Not recommended	264 120	300 136
Wing Loading lbs/ft <sup>2</sup> →					1.6 LBS KG	1.8 LBS KG
Vision	15.5	90	Not recommended	Not recommended	144 66	162 74
	15.5	96	Not recommended	Not recommended	154 70	173 79
	15.5	104	Not recommended	Not recommended	166 76	187 85
	15.5	111	Not recommended	Not recommended	178 81	200 91
	15.5	117	Not recommended	Not recommended	187 85	211 96
	15.5	124	Not recommended	Not recommended	198 90	223 101
	15.5	132	Not recommended	Not recommended	211 96	238 108
	15.5	140	Not recommended	Not recommended	224 102	252 115
	15.5	150	Not recommended	Not recommended	240 109	264 120
	15.5	168	Not recommended	Not recommended	269 122	264 120
Wing Loading lbs/ft <sup>2</sup> →			1.0 LBS KG	1.1 LBS KG	1.3 LBS KG	1.6 LBS KG
Pilot	6.6	90	Not recommended	99 45	117 53	144 65
	6.6	96	Not recommended	106 48	125 57	153 69
	6.6	104	Not recommended	114 52	135 61	166 76
	6.6	111	Not recommended	122 56	144 66	177 80
	6.6	117	Not recommended	129 59	152 69	187 85
	6.6	124	Not recommended	136 62	161 73	198 90
	6.6	132	Not recommended	145 66	172 78	211 96
	6.6	140	Not recommended	154 70	182 83	224 102
	6.6	150	Not recommended	165 75	195 89	240 109
	6.6	168	Not recommended	185 84	218 99	269 122
	6.6	188	188 85	207 94	244 111	300 136
	6.6	210	210 95	231 105	273 124	300 136
	6.6	230	230 105	253 115	300 136	300 136
Wing Loading lbs/ft <sup>2</sup> →			1.0 LBS KG	1.2 LBS KG	1.3 LBS KG	1.6 LBS KG
Triathlon	0.0	99	Not recommended	119 54	129 59	158 72
	0.0	120	Not recommended	144 65	156 71	192 87
	0.0	135	Not recommended	162 74	176 80	216 98
	0.0	150	Not recommended	180 82	195 89	240 109
	0.0	160	Not recommended	192 87	208 95	256 116
	0.0	175	175 80	210 95	228 103	280 127
	0.0	190	190 86	228 104	247 112	300 136
	0.0	210	210 95	252 115	273 124	300 136
	0.0	220	220 100	264 120	286 130	300 136
	0.0	260	260 118	300 136	300 136	300 136

The above numbers are recommendations based on the global use of similar canopies, and taking into consideration different training techniques, experiences and other varying conditions. Therefore the recommendation range may be varied based on individual and local training techniques, field elevations and prevailing atmospheric conditions.

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Aerodyne Canopy Selector						
Canopy Model	Pf	Size ft <sup>2</sup>	Student/Novice Jumpers	Intermediate Jumpers	Advanced Jumpers	Maximum
Wing Loading lbs/ft <sup>2</sup> →			1.0 LBS KG	1.1 LBS KG	LBS KG	LBS KG
Solo	6.6	190	190 86	209 95	300 136	300 136
	6.6	210	210 95	231 105	300 136	300 136
	6.6	230	230 105	253 115	300 136	300 136
	6.6	250	250 114	275 125	300 136	300 136
	6.6	270	270 123	300 136	300 136	300 136
	6.6	290	290 132	300 136	300 136	300 136
Wing Loading lbs/ft <sup>2</sup> →						1.2 LBS KG
A-2 Tandem	6.7	330	Not recommended	Not recommended		418 190
	6.7	350	Not recommended	Not recommended		440 200
	6.7	370	Not recommended	Not recommended		470 214
	6.7	389	Not recommended	Not recommended		500 227
Wing Loading lbs/ft <sup>2</sup> →			1.0 LBS KG	1.0 LBS KG	1.3 LBS KG	LBS KG
SMART Reserve	0.0	99	Not recommended	99 45	129 59	220 100
	0.0	110	Not recommended	110 50	143 65	220 100
	0.0	120	Not recommended	120 55	156 71	220 100
	0.0	135	Not recommended	135 61	176 80	220 100
	0.0	150	Not recommended	150 68	195 89	264 120
	0.0	160	160 73	160 73	208 95	264 120
	0.0	175	175 80	175 80	228 103	264 120
	0.0	190	190 86	190 86	247 112	264 120
	0.0	220	220 100	220 100	264 120	264 120
	0.0	250	250 114	250 114	300 136	300 136

The above numbers are recommendations based on the global use of similar canopies, and taking into consideration different training techniques, experiences and other varying conditions. Therefore the recommendation range may be varied based on individual and local training techniques, field elevations and prevailing atmospheric conditions.

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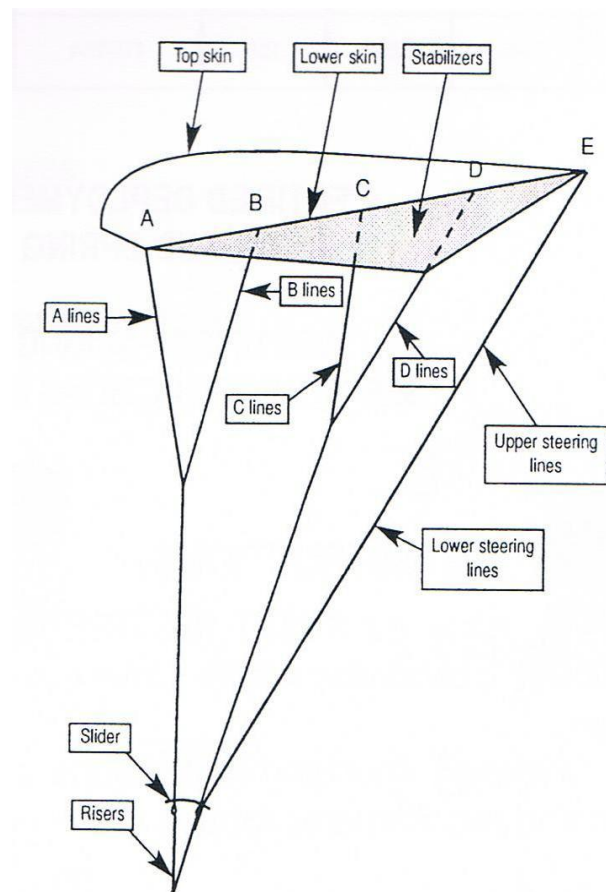
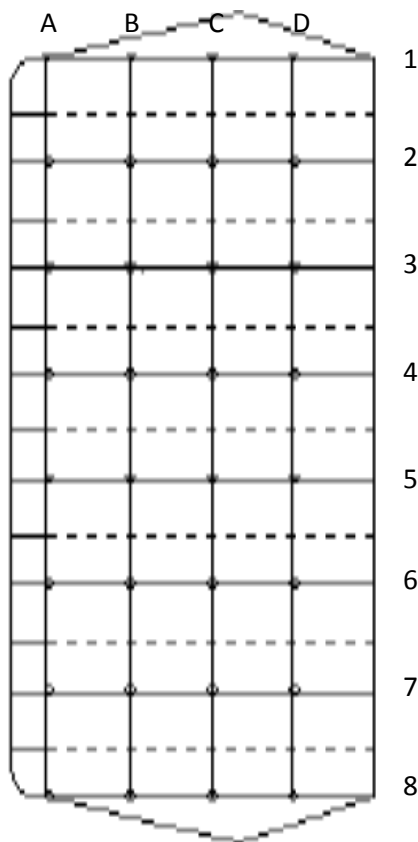
# 1 TECHNICAL CHARACTERISTICS

## 1.1 INTRODUCTION

THE MAIN CANOPY MUST BE INSPECTED AND ASSEMBLED BY A QUALIFIED PARACHUTE RIGGER AND IN COMPLIANCE WITH ALL APPLICABLE LAWS.

Before assembly, inspect the canopy, lines and links to ensure that the canopy size is compatible with the harness/container and deployment system with which it is to be used.

## 1.2 DESCRIPTION:



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### 1.3 TECHNICAL SPECIFICATIONS AND LIMITATIONS

Canopy Model	Pf	Wing Area ft <sup>2</sup>	Span ft.	Chord Max	Chord Min	Aspect Ratio	No. of Cells	Fabric	Suspension Lines	WEIGHT LBS KG	VOLUME in <sup>3</sup>
Mamba	22.1	90	15.6	6.39	4.27	2.7	9	ZP	500 or 750 LBS HMA	4.51 2.05	289
	22.1	96	16.1	6.57	4.39	2.7	9	ZP		4.66 2.12	299
	22.1	104	17.3	6.86	4.59	2.7	9	ZP		4.84 2.20	317
	22.1	111	17.8	7.08	4.73	2.7	9	ZP		5.00 2.27	321
	22.1	117	18.3	7.30	4.88	2.7	9	ZP		5.14 2.34	330
	22.1	124	18.6	7.50	5.02	2.7	9	ZP		5.29 2.41	340
	22.1	132	18.9	7.74	5.17	2.7	9	ZP		5.46 2.48	357
	22.1	140	19.4	7.98	5.33	2.7	9	ZP		5.61 2.55	368
	22.1	150	20.1	8.21	5.49	2.7	9	ZP		2.83 2.65	381
Vision	15.5	90	15.4	6.62	4.43	2.76	9	ZP	725 LBS SPECTRA or HMA	4.61 2.10	296
	15.5	96	15.9	6.80	4.55	2.76	9	ZP		4.77 2.17	306
	15.5	104	16.5	7.11	4.76	2.76	9	ZP		4.98 2.27	320
	15.5	111	17.1	7.33	4.91	2.76	9	ZP		5.14 2.34	330
	15.5	117	17.5	7.56	5.06	2.76	9	ZP		5.30 2.41	340
	15.5	124	18.0	7.77	5.20	2.76	9	ZP		5.46 2.48	351
	15.5	132	18.6	8.01	5.36	2.76	9	ZP		5.63 2.56	368
	15.5	140	19.2	8.26	5.53	2.76	9	ZP		5.79 2.63	379
	15.5	150	19.8	8.51	5.69	2.76	9	ZP		6.01 2.73	393
	15.5	168	21.0	9.07	6.07	2.76	9	ZP		6.34 2.88	416
Pilot	6.6	90	15.30	6.27	5.30	2.51	9	ZP	725 LBS SPECTRA or HMA	4.74 2.15	304
	6.6	96	15.51	6.36	5.40	2.51	9	ZP		4.88 2.22	314
	6.6	104	16.16	6.62	5.63	2.51	9	ZP		5.08 2.31	327
	6.6	111	16.54	6.78	5.76	2.51	9	ZP		5.24 2.38	337
	6.6	117	16.91	6.93	5.89	2.51	9	ZP		5.39 2.45	347
	6.6	124	17.64	7.23	6.15	2.51	9	ZP		5.46 2.48	351
	6.6	132	18.20	7.46	6.35	2.51	9	ZP		5.63 2.56	368
	6.6	140	18.74	7.68	6.54	2.51	9	ZP		5.79 2.63	379
	6.6	150	19.40	7.95	6.77	2.51	9	ZP		6.01 2.73	393
	6.6	168	20.53	8.42	7.16	2.51	9	ZP		6.34 2.88	416
	6.6	188	21.72	8.90	7.58	2.51	9	ZP		6.71 3.05	440
	6.6	210	22.95	9.41	8.01	2.51	9	ZP		7.08 3.22	465
Triathlon	0.0	99	14.12	7.05		2.0	7	ZP	725 LBS SPECTRA/ 600 LBS DACRON	3.96 1.80	242
	0.0	120	15.50	7.74		2.0	7	ZP		4.84 2.20	316
	0.0	135	16.43	8.20		2.0	7	ZP		5.28 2.40	349
	0.0	150	17.33	8.65		2.0	7	ZP		5.72 2.60	370
	0.0	160	17.83	8.90		2.0	7	ZP		6.16 2.80	390
	0.0	175	18.67	9.32		2.0	7	ZP		6.38 2.90	405
	0.0	190	19.46	9.71		2.0	7	ZP		6.82 3.10	420
	0.0	210	20.25	10.11		2.0	7	ZP		7.04 3.20	435
	0.0	260				2.0	7	ZP			
Solo	6.6	230	24.03	9.85	8.38	2.51	9	HYBRID	525 LBS DACRON or SPECTRA	7.41 3.37	486
	6.6	250	24.05	10.27	8.74	2.51	9			7.74 3.52	507
	6.6	270	26.03	10.67	9.08	2.51	9			8.05 3.66	527
A-2	6.7	330	28.11	11.31	9.09	2.61	9	HYBRID	1500 LBS SPECTRA or HMA	12.10 5.49	761
	6.7	350	29.90	11.94	9.42	2.61	9			12.54 5.70	788
	6.7	370	30.16	12.08	9.75	2.61	9			13.00 5.90	816
	6.7	389	31.17	12.76	10.85	2.61	9			14.30 6.50	898
SMART	0.0	99	14.11	7.02		2.0	7	0-3 CFM	725 LBS SPECTRA	3.30 1.50	262
	0.0	110	14.83	7.38		2.0	7			3.74 1.70	275
	0.0	120	15.59	7.71		2.0	7			3.96 1.80	293
	0.0	135	16.40	8.14		2.0	7			4.18 1.90	333
	0.0	150	17.32	8.63		2.0	7			4.40 2.00	346
	0.0	160	17.82	8.86		2.0	7			4.62 2.10	360
	0.0	175	18.67	9.28		2.0	7			4.84 2.20	384
	0.0	190	19.46	9.68		2.0	7			5.29 2.40	409
	0.0	220	20.90	10.40		2.0	7			5.96 2.70	476
	0.0	250	22.80	10.93		2.0	7			6.60 3.00	488

**DEPLOYMENT SYSTEM: DEPLOYMENT BAG AND PILOT CHUTE**

**PACKING METHOD: SEE THE INSTRUCTIONS IN THIS MANUAL**

PRIOR TO ASSEMBLY, PACKING OR USE OF THIS PRODUCT, READ AND FULLY UNDERSTAND THE CONTENT AND ALL WARNINGS CONTAINED IN THIS MANUAL, AND CAREFULLY FOLLOW ALL INSTRUCTIONS BEFORE AND DURING PACKING AND USING THE PARACHUTE SYSTEM

## 2 ASSEMBLY AND OPERATING INSTRUCTIONS

Before assembly, inspect the canopy, lines and links to ensure that the main canopy size is compatible with the harness-container and deployment system with which it is to be used. Read and follow all assembly and operating instructions, and follow all manufacturer specifications, instructions and requirements for use of the parachute system.

It is important to understand that the correct deployment of the main canopy is also dependent upon a number of factors, which are related to the harness-container system. Ensure that the deployment bag properly contains the main canopy, and that the bag is fitted with 4 grommets for closure. For proper deployment it is essential that the bag remains closed until line stretch. It is also important to ensure that the toggle system in the risers provides for a secure and protected brake setting. Premature brake release during deployment will most likely result in a malfunction.

### 2.1 INSPECTION BEFORE PACKING AND ASSEMBLY

1. Read and understand this manual and be qualified by proper instruction for sport parachuting activities.
2. Ensure that the **MAIN CANOPY** size is compatible with the harness-container and deployment system with which it is to be used.
3. Prior to assembly and/or packing of the **MAIN CANOPY**, a thorough inspection must be completed, including but not limited to inspection of the following:

- Upper skin
- Lower skin
- External ribs
- Internal ribs
- All stitching on fabric and lines
- Slider and grommets
- Soft links/connector links
- Cutaway handle integrity and correct size fitted

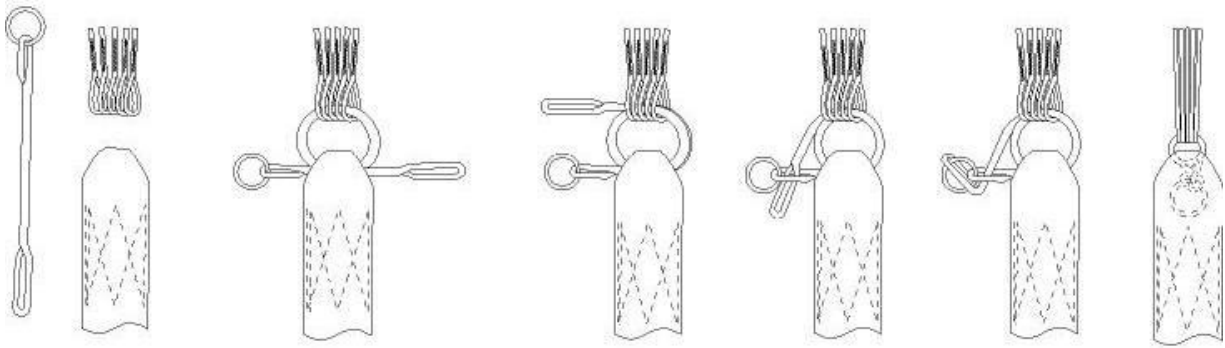
Take note of any worn, damaged, corroded or incorrectly rigged components, which must be repaired or replaced before the **MAIN CANOPY** is packed for use.

## 2.2 INSTALLATION OF THE SOFT LINKS

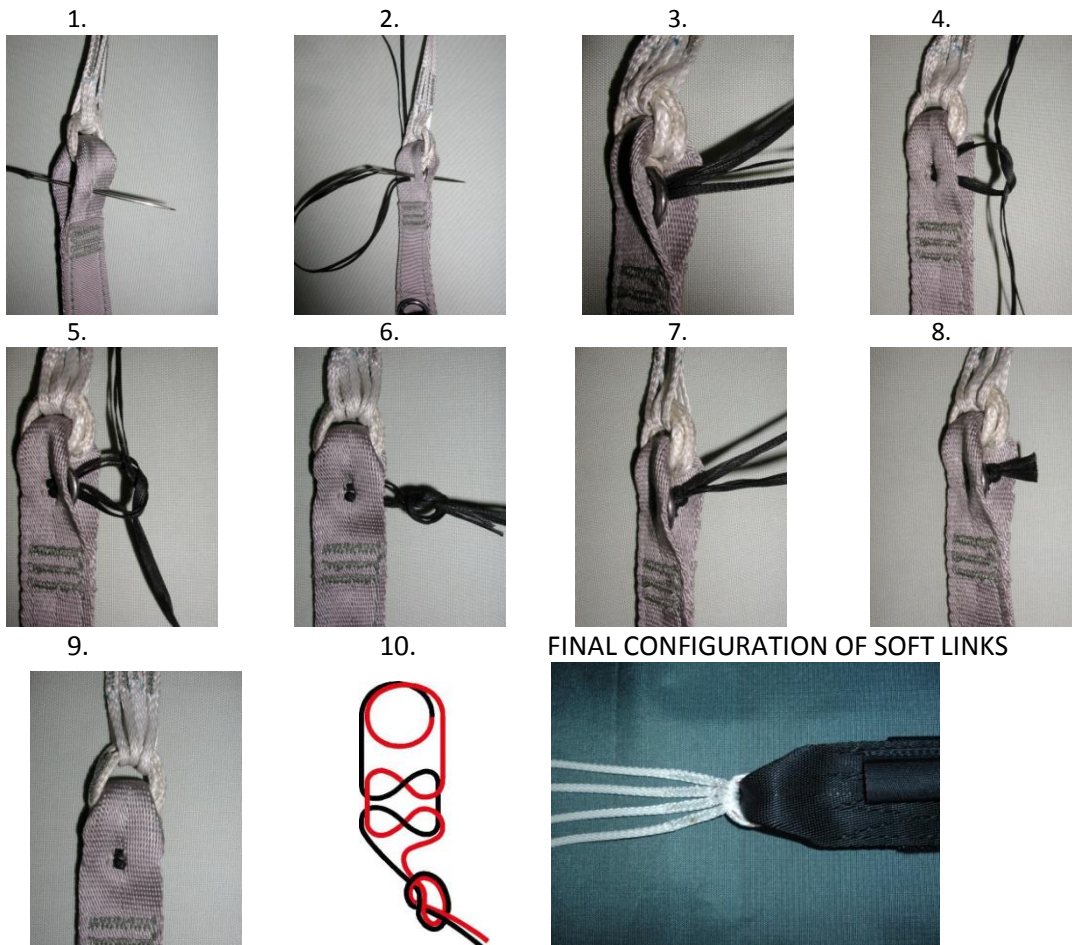
Soft Link type for individual main canopies

PN: **P 1487-01**

Installation Procedure on front and rear main risers:

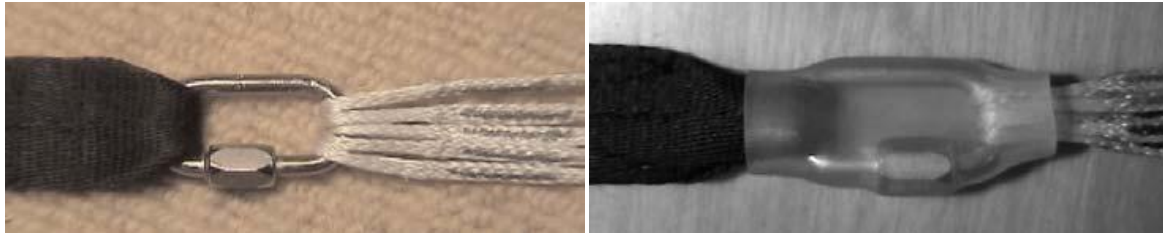


Secure the Soft Link ring in the webbing pocket, and hand tack as shown.



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If the canopy is connected to the risers with stainless steel rapide links, tighten the barrel with a wrench (do not over tighten or you may break the barrel) and slide the silicone tube over the link for protection.



## 2.3 PACKING THE MAIN CANOPY

### 2.3.1 SETTING UP THE CANOPY

1. Lay the canopy harness out and attach the lines to their respective riser. Ensure proper line continuity and that the links are correctly installed. (Refer to section 2.2)
2. Check that the slider is correctly installed (tapes facing the canopy).
3. Install the soft links according to the instructions on page 11. When using stainless steel rapid links, make sure that you do not over tighten the barrel.
4. Clear the steering lines of any twists and route them through the appropriate grommets and guide rings on the rear risers.

**CAUTION:** The steering lines must pass directly from the trailing edge of the canopy through the slider grommet and the guide ring, without passing under or through any suspension lines.

5. Attach the steering toggles at the trim marks on the steering lines (Refer to the owner's manual of the harness-Container system).
6. Re-check the whole assembly for line continuity and direction of flight i.e. canopy facing forward.
7. Carry out a thorough inspection before packing the canopy. Items to inspect include, but are not limited to: UPPER SKIN, LOWER SKIN, EXTERNAL RIBS, INTERNAL RIBS, ALL STITCHING ON FABRIC LINES, SLIDER AND GROMMETS AND SOFT LINKS/CONNECTOR LINKS.

Take note of any worn, damaged, corroded or incorrectly rigged components, which must be repaired or replaced before the canopy is packed for use.

### 2.3.2 PACKING THE CANOPY

#### LAYING THE CANOPY OUT

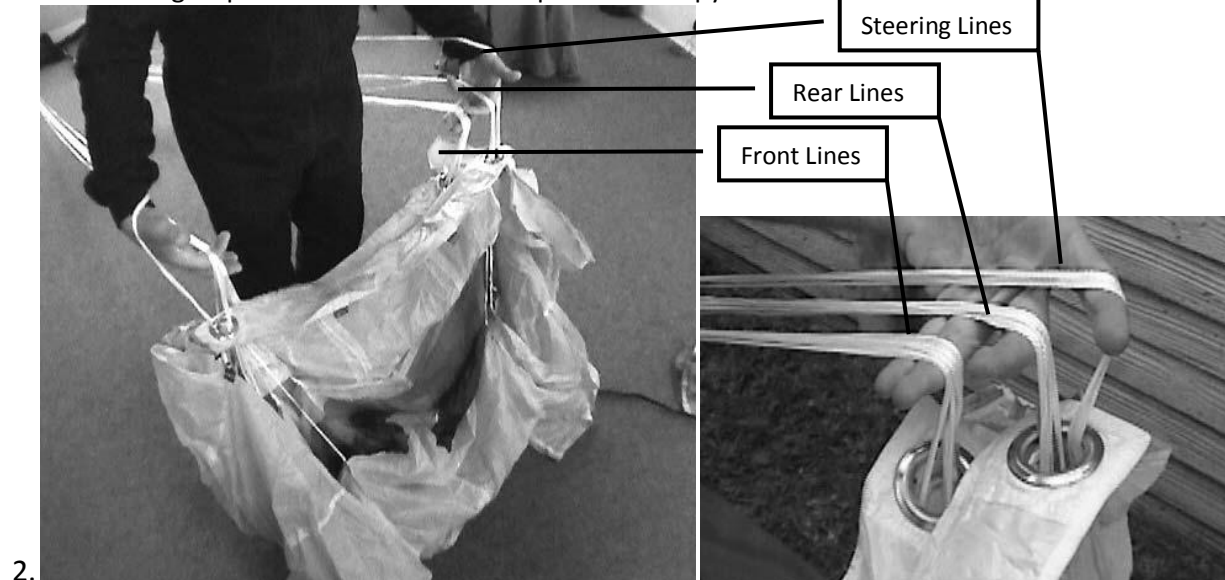
After assembling and inspecting the canopy and harness/container, lay the parachute system out on a smooth, clean surface.

To set the toggles refer to your harness/container user's manual.

Undo the slider retraction, make sure you have fully stretched slider and that the retraction tabs are pulled firmly against the trailing edge, so that they cannot catch on lines.



Take the line groups at the risers and walk up to the canopy.



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Clear the nose of the canopy by flaking the leading edge. Pull out and count the cells. Align the front edge of the slider with the flaked leading edges.

Take the canopy in one hand.

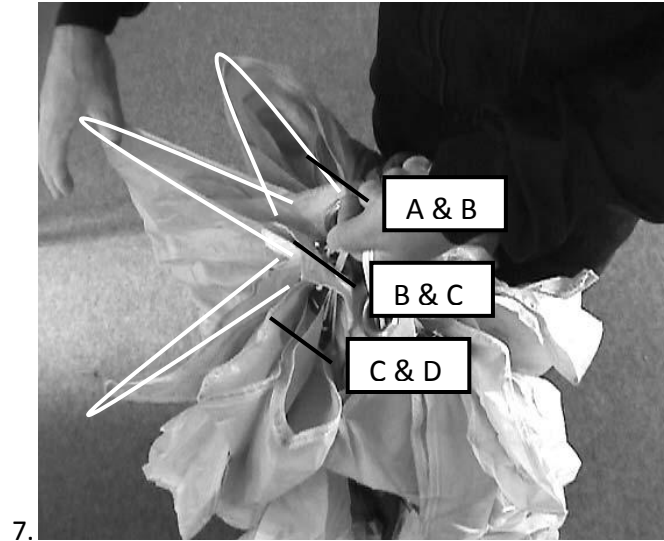


Holding the cell inlets firmly, shake the canopy vigorously to clear the fabric from the lines. Then, on one side of the canopy, separate line groups A & B and fold.



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Separate line groups B to C and C to D in the same way.



Flake the stabilizers to the tail.



Fold the tail outwards.

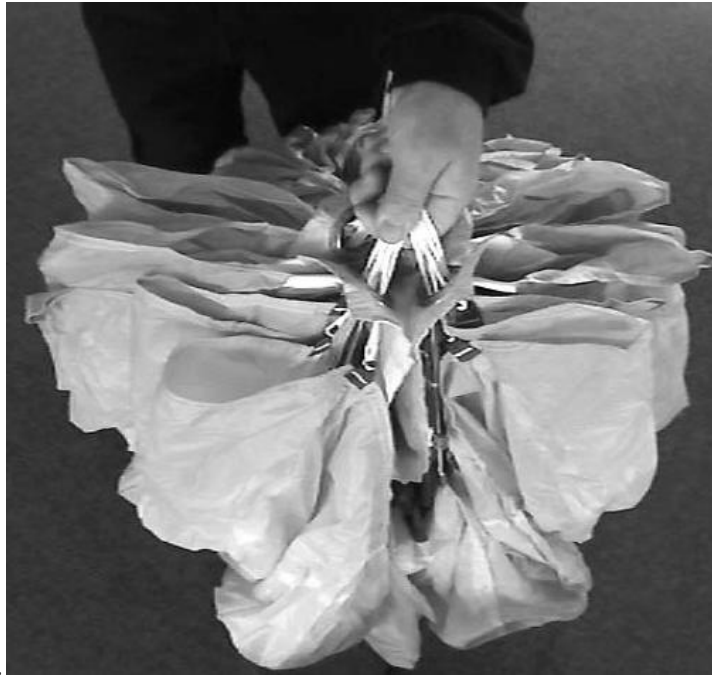


Repeat the same operations on the other side of the canopy



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This is a view of the flaked canopy. While keeping the nose pointing towards yourself, check that the slider is properly spread out between the 4 line bundles (front, back, and right, left) and that the slider grommets are pushed up against the slider stops. Note that all (steering) line attachments are at the center.



11.

Pick up the center cell by its leading edge (identified by small red tape) and lay it on top of the lines just below the slider. Hold firmly, and make sure that the slider stays in place, pushed up against the slider stops. Also make sure that the steering lines remain in the center and at the back.



12.



13.

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Clear each side of the tail and bring them around towards the front (nose) of the canopy. It is very important to make sure that no (steering) lines pass in front of the leading edge (nose), as this may cause a line-over malfunction.



14.

Join the two air inlets in front of the air inlets (the leading edge) and roll the tail between the two arrows, making sure not to catch the leading edge in to the roll. Never lose the grip on the line bundle and the slider.



15.

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Gently swing the canopy out and lay it on the floor as shown. Carefully push the air out of the canopy. Again, make sure that the slider stays in place against the slider stops. **WARNING: IF THE SLIDER IS NOT AGAINST THE SLIDER STOPS, THE POSSIBILITY OF A HARD OPENING AND SERIOUS INJURY OR DEATH IS SIGNIFICANTLY INCREASED.**



16.

S-fold the canopy bundle as required for the D-bag. Then gently slide the canopy into the D-bag.



17.



18.

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Close the D-bag and stow the lines.



19.

Stow all the lines but leave about 60 to 70cm (23" TO 27") free to prevent line twists.



20.

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## **2.4 IN FLIGHT USE.**

When deploying your main canopy keep your shoulders horizontal to load the canopy evenly and prevent off heading openings.

Should you encounter a line twist after canopy deployment, do not release the brakes until you have cleared the twist.

Please be extremely cautious if the canopy turns during the line twist, because you may lose altitude rapidly. In some cases, a twist is not merely an incident, but becomes a serious malfunction. You may encounter extreme difficulty to clear a twist with higher wing loadings and when you are turning on your back. Should this occur, do not hesitate to cut away.

After the opening, be ready to steer the canopy away from the other traffic, either with the rear risers of the steering toggles. Once clear from traffic, check your canopy and your position relative to the landing area. Prepare for landing by following a trajectory that allows you to set up at an altitude sufficient for a final approach and landing facing into the wind.

During the descent, while still at a reasonable altitude, check the stall point of the canopy. This action will give you the information required to make a perfect landing flare.

Upon landing, flare the canopy symmetrically in such a way that maximum lift is achieved at the moment of touchdown. This will also reduce forward speed.

Do not turn low to the ground! Turns increase both vertical and forward speed. Without sufficient altitude your canopy will not be able to recover from the turn before landing.

Please remember it is more important to maintain a stable flight and make a proper landing flare, than to face the wind. When you are not absolutely sure that sufficient altitude remains to turn into the wind, continue to fly the canopy on its present heading, and execute a good flare.

**DANGER!**  
**DO NOT MAKE A TURN CLOSE TO THE GROUND**

### 3 MAINTENANCE

Jumpers are encouraged to inspect their canopies during packing and to perform preventive maintenance. Follow the provided guidelines to inspect your canopy during normal use.

#### 3.1 MAINTENANCE PROCEDURES:

Important points to note during the inspection are:

1. Visually inspect the canopy for defects or damage to the fabric, tapes and seams. Any holes or tears must be patched with an overlay or standard sew-in patch. No ripstop tape patches are allowed. Any damage that requires the replacement of an entire panel or cell must be done by the manufacturer.
2. Check that all slider stops are present, intact and secure. There are four slider stops, one on each of the outer B and C line groups.
3. Check that all line attachment tapes are secure (Bartack present).
4. Check suspension and steering lines continuity, and ensure that all connections and finger traps have been stitched. Lines that are worn or have broken strands must be replaced.
5. Inspect the connector links for serviceability, and check that they have been correctly tightened, or in case of soft links, verify their integrity.
6. Check the slider for correct installation; the reinforcing tape must be facing the canopy. Inspect the inner surface of the grommets for nicks and sharp edges. Inspect the fabric for wear and tear.
7. Using the manufacturer's manual as a guide, inspect the harness/container system into which the main canopy is to be packed. Check all stitching for completion. Inspect hardware for damage and corrosion (rust may be removed with a lightly oiled rag).
8. Inspect the pilot chute, bridle and deployment bag. Ensure that the bridle is securely fastened to both the pilot chute and bag.
10. POROSITY: Check porosity in the following cases
  - After 100 uses
  - After immersion in water once the canopy is dry
  - After any use in abnormal conditions

If you detect any damage or unusual condition of the parachute system, contact your rigger or Aerodyne distributor before the next jump.

**REPAIRS MUST BE MADE EITHER BY THE MAUFACTURER OR BY A QUALIFIED RIGGER!**

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To make packing your main canopy easier, to prolong the life of the canopy and to prevent damage during packing, please observe the following instructions:

- A- Pack where the wind cannot affect your packing of the canopy.
- B- Do not pack on concrete or asphalt. Pack your canopy on a dry lawn or on a packing mat, thereby minimizing the wear on the lines, links and fabric.
- C- Inspect your canopy prior to packing. Look for any damage, wear and tear. Ensure that the lines have no twists, tangles or turns.

### **3.2 FREQUENCY OF MAINTENANCE PROCEDURES**

Three months in normal conditions of storage (see next paragraph) or 50 jumps, whichever occurs first. If other than normal conditions are encountered, a shorter maintenance interval is recommended.

### **3.3 STORAGE**

Textile and other materials used in the construction of all parachutes are sensitive to environmental elements. The parachute must be stored in a room where the temperature is kept between 15 degrees Celsius (59 °F) and 30 degrees Celsius (86 °F), and where the humidity is kept between 15% and 70%.

Further, the parachute must be protected from:

- Sunlight
- Temperatures of 93°C (200 °F) and above
- Acid and corrosive agents (e.g. car battery electrolyte)
- Rodents and pests
- Chlorine
- Smoke

When not in use, the equipment should be stored in its carry bag.

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