

The RA-1 is the first Ram-Air Parachute system to be Type Classified by the U.S. in over 20 years. Developed to replace the MC-4 Ram-Air Parachute System, the RA-1 provides a number of significant advantages over all other military parachute systems available today. Improvements to glide performance, canopy handling characteristics, and weight carrying capacity.

### System Specifications

The RA-1 has been certified for use to 25,000 ft Above Mean Sea Level to an all up weight of 450 lb, a 90 lb increase over the MC-4. Both the main and reserve parachutes utilize a unique reflexed airfoil section which provides a 4:1 glide ratio, allowing jumpers to travel farther under canopy. The design of the RA-1 canopy provides a unique stall resistant ability that significantly reduces the potential for jumper injury on landing.

The harness has been developed to accommodate a wider anthropomorphic range (5% female to 95% male) while providing greater comfort. The RA-1 harness container is capable of accommodating all mission essential equipment such as weapon tie down points, radio pouches, and the use of oxygen systems.

### Main Canopy

The RA-1 main canopy is a nine cell hybrid construction (zero porosity top skin, 1.1 oz 0-3 CFM nylon bottom skin) capable of three deployment methods; Double Bag Static Line (DBSL), Over The Shoulder Ripcord, and Bottom of Container Throw Out Pilot Chute (BOC).

The RA-1 main and reserve canopies both utilize a pressurized stabilizer which reduces drag during flight and provides greater canopy control during landing. The RA-1 also incorporates a collapsible slider. The pressurized stabilizers and collapsed slider result in a completely silent canopy during flight.

### Reserve Canopy

The nine cell RA-1 reserve canopy is constructed of 1.1 oz, 0-3 CFM nylon, making the reserve easier to pack. The RA-1 reserve also matches the 4:1 glide ratio of the RA-1 main canopy. Incorporation of vents in the canopy bottom



RA-1 Main

skin and mesh in the slider allow the reserve to meet demanding requirements for height loss on opening through the entire performance range of the RA-1.

### Harness Container

The RA-1 harness container incorporates a unique bio harness structure that more evenly distributes the weight of the system across the jumper's shoulders. The bio harness greatly improves comfort and fitting of the harness container. Removable side wings allow for storage of a personal radio and provide protection for exposed weapons and personal oxygen systems. The RA-1 harness container incorporates inspection windows for main and reserve ripcords.



RA-1 Reserve

## System Performance Specifications

Maximum All Up Weight:	450 lb
Maximum Deployment Altitude: (Main and Reserve)	25,000 ft AMSL
Maximum airspeed:	150 KIAS

### Equipment Data For the RA-1 (Main and Reserve Canopies)

Parachute Type	Elliptical 9 Cell Ram Air with Pressurized Stabilizers
Canopy Area	360 ft <sup>2</sup>
Canopy Span	31.7 ft
Canopy Chord Middle	12 ft
Canopy Chord Tips	9.7 ft
Canopy Aspect Ratio	2.79 b <sup>2</sup> /Sw

### Rate of Descent (Main and Reserve)

Full Flight @ 250 lbs	8.5 fps
1/4 Brakes @ 250 lbs	8.5 fps
1/2 Brakes @ 250 lbs	8 fps
3/4 Brakes @ 250 lbs	8 fps

### Maneuverability (Main and Reserve)

Stall	Resistant to Stall
Turn Rate 180° Turn	1.5 – 2 seconds
Turn Rate 360° Turn	2 – 4 seconds
Forward Speed @ 250 lbs	38 fps (26 mph)
Forward Speed @ 350 lbs	48 fps (33 mph)

### Deployment Method

Main	Free Fall, Static Line, BOC
Reserve	Reserve Static Line (RSL) or Reserve Ripcord

### Canopy Construction (Main)

Chordwise	
Half Cell Top Surface	Zero Porosity Nylon Ripstop
Full Cell Bottom Surface	0-3 CFM Nylon Ripstop
Line Strength and Type	Spectra® 1000 lb

### Canopy Construction (Reserve)

Chordwise	
Half Cell Top Surface	0-3 CFM Nylon Ripstop
Full Cell Bottom Surface	0-3 CFM Nylon Ripstop
Line Strength and Type	Spectra® 1500 lb



RA-1 in free fall



RA-1 harness



RA-1 harness container

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