

# MSC - 11

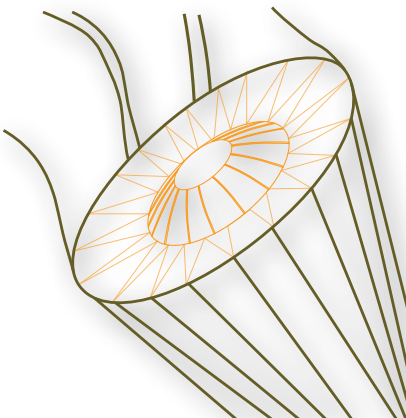
## Modular Semispherical Cruciform Parachute System



**BETTER  
PERFORMANCE**

**FASTER  
INFLATIONS**

**LOWER DROP  
ALTITUDE**



### US ARMY NOMENCLATURE: G - 16

- MSC-11 (G-16) is a direct replacement for the G-11 parachute system.
- MSC-11 (G-16) is certified for use on all G-11 certified airdrop systems/platforms by the US DOD (Department of Defense).

*\*The Fox Parachute Services, LLC Modular Semispherical Cruciform Parachute and Parachute inlet Control System are covered by U.S. Patents. & manufactured by Paradigm Parachute & Defense Inc.*

In conjunction with Fox Parachute Services, the US Army has certified the MSC-11 (G-16) Parachute System as a direct replacement for the aging G-11 parachute system throughout the US DOD. A single version of the G-16 is used to replace all versions of the G-11.

### MODULAR SEMISPHERICAL CRUCIFORM PARACHUTE SYSTEM (MSC-11):

The MSC-11 (G-16) parachute consists of a 101 ft. nominal diameter hemispherical canopy, 80 suspension lines of 46.5 ft. in length, and 4 riser assemblies with each riser assembly consisting of 2 legs of 46.5 ft. in length.

Although the MSC-11 (G-16) parachute assembly weighs slightly less than the replaced G-11 parachute assembly, it is stronger and, due to using more modern canopy fabric than is used for the G-11, it has an improved rate of descent. The parachute canopy is assembled from 20 modules; 12 square modules, 8 elliptical shaped modules, and 4 diamond shaped modules. Each module is an independent element and is secured to its neighboring modules with bulk material securing ties. In the event that some portion of the canopy is damaged, the securing ties can simply be cut, allowing the damaged module to be easily removed and replaced by tying in a serviceable replacement module. Any removed module can later be assessed for disposal or repair. If the module is to be repaired, using simplified repair methods, relative to G-11 repair methods, the repairs can be delayed until a convenient time for the user and, in the meantime, the parachute can be returned to service.

The 80 suspension lines are fabricated with an identical loop at each end. One end of each suspension line is connected to the canopy skirt with a tie that is identical to the ties that connect the canopy modules to one another. The opposite end of the suspension lines, in groups of 10, are connected to the top end of the riser legs with soft links (soft links are somewhat like ties). These features also make suspension line or riser replacements fast and simple.

The bottom ends of the four riser assemblies are grouped with one another using a typical G-11 clevis and, except for reefing cutters, is the only metal component in the parachute.

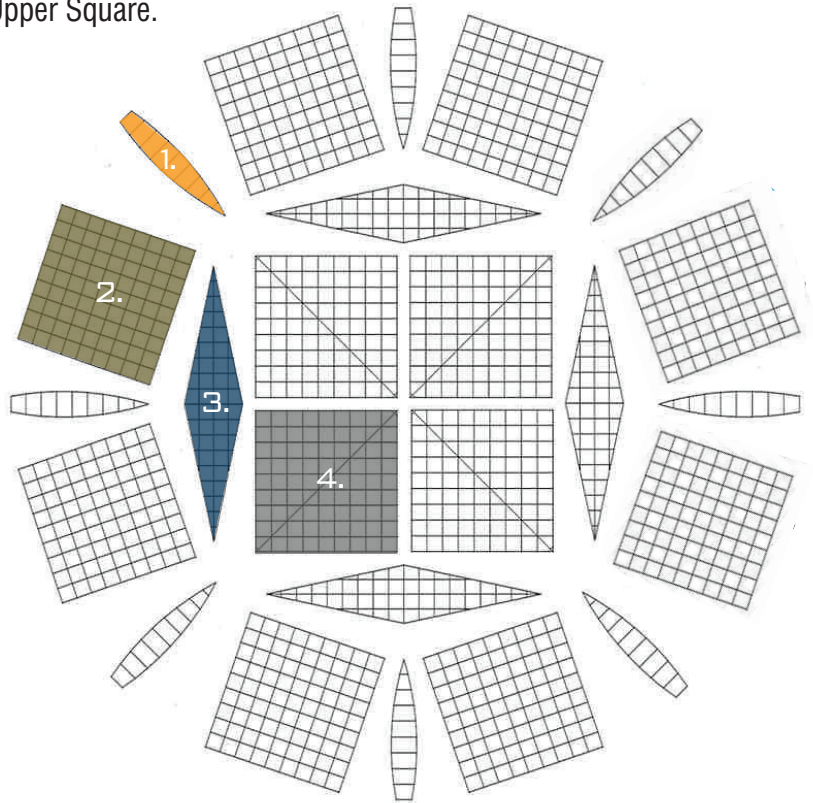
### PARACHUTE INLET CONTROL SYSTEM:

The key element to the MSC-11's ability to be airdropped at lower altitudes than the equivalent G-11, is the ICS (Inlet Control System) also known as the Skirt Spreader. The Skirt Spreader is, essentially, a small, strategically positioned, highly vented, internal canopy, which inflates rapidly due to its small size: first firmly circularizing the main parachute skirt and then acting as the reefing element. The rapid inflation creates a high-pressure area at the skirt of the MSC-11 canopy that blasts the canopy to its full reefed diameter prior to the main canopy apex emerging from the deployment bag. Also, the highly pressurized spreading/reefing arrangement maintains, a rigid circular shape for the skirt region of all main parachutes during the reefed stage, be it a single main parachute or a cluster of main parachutes. With clustered main parachutes, this feature prevents leading and lagging main parachutes during the high-dynamic-pressure stage, which, in turn, eliminates chain reaction parachute failures. These early-stage rapid, symmetrical, and simultaneous, inflations of clustered parachutes, also results in significantly less altitude loss, before reaching steady-state descent, when compared to parachutes with conventional reefing.



### MODULAR CONSTRUCTION DESIGN:

- Lower Maintenance Cost
- Canopy maintenance, only four unique modules are needed to be stocked as replacement sub-assemblies 1) Elliptical, 2) Lower Square, 3) Diamond, 4) Upper Square.



**REDUCE  
LOGISTICAL  
FOOTPRINT &  
LOWER  
MAINTENANCE  
COSTS**

### SPECIFICATIONS

Nominal Diameter	101 feet / 30.8 meters
Canopy Material	1.9 oz Diamond Weave Nylon 1.2 oz PIA-C-44378 Nylon
Suspension Line	PIA-C-7515 TY IV, 1,000lbs
Suspension Line Length	46.5 feet / 14.2 meters
Riser Length	46.5 feet / 14.2 meters
Parachute Weight	216 lbs / 98 kgs
Deployment Bag	G-11 (Part #)
Typical Drop Airspeed	130-145 KIAS

*Cotton deployment bag liner/sleeve.*