

In the last years, Combat Search and Rescue (CSAR) and Search and Rescue (SAR) operations, both military and civil, have evolved towards very high specialization levels, and require the most advanced equipment.

CIMSA Ingeniería de Sistemas, S.A. has devoted all its knowledge and technical and human means to transform and adapt the High Glide Tactical System TPM-PLUS, which has excellent results in HALO/HAHO operations, into a specific system for SAR and CSAR missions.



The aim of such mission is to give the medical support and the necessary protection to the personnel to be rescued, until the final rescue is performed.

The **TPM-Plus SAR/CSAR Tactical System (P/N 502903 – NSN 1670-33-206-1567)** has been provided with the following characteristics:

Capacity of water landings, mainly in the sea, where the parachute should be an additional element of support for the buoyancy, as well as a signaling element for location.

Capacity of canopy flight in adverse weather conditions (strong winds, low visibility, ignorance of the flying and landing area) that require a quick and reliable answer from the parachute system, as well as a high glide capacity against strong winds.

High maneuverability for landings in narrow areas, taking into account the possible adverse weather conditions.

Comfort, easy adaptability and reliability of the equipment to different situations and aircraft, allowing the parachutist to reach the target in optimal personal conditions with his mission equipment complete.

The TPM-Plus SAR/CSAR system allows the following tactical mission settings:

1. BOC hand deploy
2. Over the shoulder ripcord
3. AAD for main canopy
4. Double bag static line

It also allows the following jumping options:

1. Solo
2. Solo with 50 kg cargo/rescue equipment.

Model	TPM SAR
P/N harness/container Assy.	406005
Configuration	Single
Size	Universal
Main fabric	Cordura 1000 Ds
Inner fabric	Termolen®
Adjustment points	6
Cargo attachment points	4
Main container closing system	1-pin
Reserve container closing system	1-pin
Main ripcord openings	Yes
Main AAD openings pre-installation	WAR2
Hand deploy pilot chute openings	Yes
Static line with double deployment bag	Yes
Reserve ripcord openings	Yes
Reserve static line (RSL)	Yes
Reserve AAD Pre-installation	CYPRES, VIGIL
Max. Operating Speed (KEAS)	150
Max. Operating Weight (Kg)	166
Max. Operating Altitude (Ft)	13500
Min. Operating Altitude (Ft)	1200
Canopy range (Ft) <sup>2</sup>	225

The TPM SAR harness/container is equipped with inherent positive buoyancy thanks to its cross-linked polyurethane construction (closed cells Termolen®), which allows the whole equipment to float for its location and re-use.

The TPM-PLUS SAR/CSAR Tactical System includes two state of the art high glide ram-air Plus canopies, designed to conduct search and rescue missions by the specialized SAR and CSAR operations groups for the rescue of personnel who need immediate medical assistance or who need help and/or protection, both in water and mainland.

The TPM-PLUS SAR/CSAR parachute assembly includes pre-installation of the WAR2 Waterproof Automatic Ripcord Release Model 451-600 for automatic activation of the main canopy in order to allow full concentration of the parachutist when flying in direction to the point of landing in whatever possible scenario.

Likewise, it also includes pre-installation of an Automatic Activation Device (AAD) CYPRES or VIGIL for reserve canopy.

The Plus canopies for the TPM-Plus SAR system present the following characteristics:

Model	PLUS-225 0CFM 7-CELL	PLUS-225 03CFM 7-CELL
P/N	317539-225	317538-225
Configuration	Standard	Standard
Fabric	0CFM	0.5-3CFM
Suspension lines	Spectra 1000Lb	Spectra 1000Lb
Nr. of Cells	7	7
Size (Ft) <sup>2</sup>	225	225
Shape	Square	Square
Application	Main	Reserve & Main
Max. Operating Speed (KEAS)	150	150
Max. Operating Weight (Kg)	166	166
Min. Recommended Weight (Kg)	60	60
Glide Ratio (L/D)	3:1	3:1
Central Chord (m)	3.14	3.14
Extreme Chord (m)	3.14	3.14
Span (m)	6.58	6.58
Aspect Ratio	2.10	2.10