



Members of a Forward Reconnaissance Company patrol land in an orderly fashion after navigating with their parachutes deployed for almost 14 kilometres.



Inside the aircraft, the oxygen technician checks the positions occupied by the paratroopers before switching them to the collective supply consoles. Prior to boarding, individual equipment, in particular the descent cylinders, must be inspected to ensure everything is working properly.

JUMPING AT HIGH ALTITUDE WITH OXYGEN

Paratroopers from Spain and four other nations train in exercise Lone Paratrooper in Valladolid, Spain

AS soon as the A400M transport aircraft reaches 10,000 feet, low pressure starts to affect Captain Beltrán and the eight members of the patrol he leads as commander of the Forward Reconnaissance Company (CRAV in Spanish) of the 6th Parachute Brigade (BRIPAC) "Almogávares". In order to climb to 18,000 feet in optimal physiological conditions, members of this small elite unit must undergo

a process of blood "cleansing" for just over 30 minutes. From that altitude, they must jump into the void, deploying their parachutes immediately to glide nearly 14 kilometres behind enemy lines undetected and safe from anti-aircraft defences.

Using masks that cover their faces and connected by hoses to the oxygen supply consoles at their feet, they breathe pure oxygen to combat altitude sickness. This supplementary supply to their lungs also

helps them eliminate, through their breathing, the nitrogen in their tissues, alveoli and blood, thus preventing potential hypoxia during climb or decompression sickness during descent.

Throughout this "denitrogenation" process, jumpers are supported inside the aircraft by a jumpmaster, an oxygen technician and a physiological training technician. The three of them are also free fall paratroopers, but will only jump in case of emergency. The

CAPTAIN JUAN LUIS DE LA CASA BELTRÁN

> Head of the Forward Reconnaissance Company

“The higher the altitude, the greater the safety”

“THE higher we jump, the more we can navigate with our parachutes deployed to the insertion point and the safer we are from enemy anti-aircraft defences”. According to the head of the BRIPAC's Forward Reconnaissance Company, high-altitude jumps with oxygen are a technique that allows for the covert insertion of a small group of select troops behind enemy lines without being detected. It is a tactical technique “subject to the altitude and the wind velocity that propels us”. This is why the ground-based calculations used to set the precise coordinates at which the aircraft's pilot must give the green light to begin the jump or the red light to halt it are not always accurate. “We are the first to arrive; we delimit, clear and secure the parachute drop zone for the bulk of the force to enter”.



The Jumpmaster and the Oxygen and Physiological Training technicians make up the High-Altitude Airdrop Service



The jumpmaster (left) is in charge of checking the paratroopers' equipment and gear one by one at the foot of the aircraft ramp and authorising their boarding if everything is in order.

role of these “black monkeys”, so called because members of the BRIPAC's Airdrop Company wear black jumpsuits during operations, is not to infiltrate hostile territory. Their mission is to provide a flight service that allows their fellow crew members to successfully perform high-altitude jumps with oxygen, or HALO-HAHO jumps (the initials stand for high-altitude low-opening and high-altitude high-opening, respectively). “This is a highly technical military parachuting procedure and to practise these jumps is the main goal of exercises Lone Paratrooper, run by the BRIPAC since they began 27 years ago”, says LTC Javier Escrig. He is the head of the BRIPAC's Logistic Support Group and director of this year's edition of exercise Lone Paratrooper, held from 8 to 19 September at Villanubla air base (Valladolid).

These exercises make up the most demanding phase of the combined-joint parachute infiltration training taking place every year in Europe. Its airdrop programme makes it possible to exchange tactical procedures

and experiment with new materials, which is highly appealing to the elite units of the Spanish Armed Forces and State Security Forces, and to many foreign militaries as well.

In addition to members of the BRIPAC's CRAV, this edition was attended by personnel from the Special Operations Command representing the Army, the Navy's Special Warfare Force, the Parachute Engineer Squadron, and the Air and Space Force's and Civil Guard's Military Parachuting Schools, along with military personnel from Brazil, the United States, Italy and Portugal. Altogether, there were 176 paratroopers: 129 Spanish and 50 from abroad.

Within a radius of 27 nautical miles (37 kilometres), they performed nearly 1,500 jumps at different altitudes up to a ceiling of 27,000 feet. To do so, they were distributed in 150 rotations aboard A400M, C-295 and C-212 Aviocar transport aircraft, along with an AS532 Cougar helicopter from the Army Air Corps.

According to LTC Escrig, "Each jumper performed at least one free fall jump a day and another one with oxygen at various times of the day and night, utilising night vision goggles or with restricted visibility".

HIGH ALTITUDE PROCEDURES

One of the primary efforts this year was to improve and complement each paratroop-



Paratroopers fly downwind and always land into a headwind.

FIRST SERGEANT GUSTAVO JAVIER PÉREZ CENTURION > Oxygen Technician

"The oxygen supply cannot fail"



THIS is his sixth year in charge of the Free Fall Section of the BRIPAC's Airdrop Company. "This is my job on the ground", says First Sergeant Centurion. "In the air, I am a crew member of the Flight Service, either as a Jumpmaster or a Physiological Training or Oxygen Technician". When assigned to the latter position in a HALO-HAHO jump, this NCO with 20-years' service in the BRIPAC assumes he will be the only passenger standing and moving around for the entire flight. "We have to continuously check the collective and individual equipment, the hoses and the masks". He is also the first to board when the aircraft verification procedures begin, while the flight briefing takes place in the nearby hangar, distributing the oxygen supply consoles inside the aircraft to the jumpers around them. "I am in charge of ensuring the oxygen supply to all personnel after take-off and until landing. The oxygen supply cannot fail".

According to LTC Escrig, "HALO-HAHO jumps are highly technical military parachuting procedures"

ARMED FORCES

A total of 176 military personnel participated in the exercise: 129 from the Spanish Armed Forces and the Civil Guard, and 50 from Brazil, the United States, Italy and Portugal

er's capability to outfit themselves with oxygen equipment inside the aircraft —that is, during the flight rather than prior to take-off—, since it will help them on long-haul flights. “We also insisted on forming mixed patrols made up of small teams of two members, one Spanish and one

foreign, from the Army, Navy or Air and Space Force”, pointed out LTC Escrig.

The latest edition of Lone Paratrooper also aimed to improve tandem capability. “This is a key element in an infiltration operation when bringing someone into the area who is not a qualified paratrooper: medical

staff, diplomats, translators, interpreters, explosive detection dogs (EDDs), etc.”, said First Corporal José Enrique González León, an experienced tandem pilot, as he prepared for the high-altitude jump alongside a civil guard to whom he was already strapped inside the A400M. The exercise also involved practising high-altitude navigation procedures for landing in confined areas, i.e. “small drop zones, as might occur in a real situation”, said Lone Paratrooper director. Each jumper must be skilled in handling parachutes and organising the patrol before landing. In terms of testing new materials, the BRIPAC is attempting to acquire a canopy tracking system that would enable the main parachute canopy to be recovered when the jumper has to release it in the event of an emergency due to malfunction and switch to the reserve parachute.

MASTER SERGEANT MARÍA ISABEL AMAT ANDRÉS

> Physiological Training Technician

“I take care of the jumpers’ health”

“ALTHOUGH we are not flight surgeons or nurses, as a physiological training technician, my concern is the health of the jumpers until they leave the aircraft”, says Master Sergeant Amat, referring to the expertise she acquired at the Centre of Aerospace Medicine. “During the flight, different situations can arise, from hypoxia to decompression sickness. Our mission is to identify and address any issues as they arise, since making the jump is what really matters. Only when that proves impossible do we land”. Thanks to her many years of experience, Master Sergeant Amat is very familiar with the procedures followed in the airdrop service when using oxygen. Since 2007, she has been part of the BRIPAC, where she combines this activity with being the leader of a Supply Section. “I handle all of the parachute repair supplies and spare parts”.

FLIGHT ASSISTANCE

Master Sergeant Arturo Mompín, a black monkey and the Oxygen Section commander of the Airdrop Company, says that, when they climb with oxygen, they need a jumpmaster, an oxygen technician and a physiological training technician on the aircraft. Next to him is First Corporal Luis Fernando del Pozo, who expands on the role of the jumpmaster: “He is in charge of making sure the jump is executed safely, taking into account the altitude at which it is performed”. His work begins at the foot of the aircraft ramp, where he inspects each jumper's equipment. “He checks that the parachute is properly packed, the barometric device is turned on, the tracking device is in place, the oxygen bottle is full, the hose is correctly connected to the mask, the individual breathing system is working as a whole, etc.”, explains Mompín. Once this phase is completed, the oxygen technician comes into play, distributing the paratroopers inside the aircraft, connecting them to the collective supply consoles, and constantly checking to make sure that all personnel will receive pure oxygen.



MASTER SERGEANT JUAN JOSÉ GONZÁLEZ PINTO

> **Jumpmaster**

“I’m the one giving the orders on the aircraft”

“**F**OR a decade, I have had all the qualifications required for this type of air-drop”, says Master Sergeant Pinto as he lands after successfully completing his job as jumpmaster on a high-altitude flight. “Along with the pilot, I am in charge of the aircraft and decide whether or not to continue the operation in the event of a problem with the oxygen supply or hypoxia symptoms in any of the jumpers”. Before boarding, he must inspect, at the foot of the ramp, the equipment carried by each paratrooper.

“During the climb, I check the times and alerts to the jumpers until we reach the altitude set for them to jump”, says this NCO, the right-hand man of the captain of the Air-drop Company.



While the aircraft reaches the altitude planned for the jump, Master Sergeant María Isabel Amat remains seated in the middle of the aircraft. As a physiological training technician, she checks each jumper's blood oxygen saturation with a pulse oximeter and observes whether any of them move or raise their hands, which could be a sign of a problem. “I check whether their fingernails are purple, if they are asleep or have a blank look on their faces, etc., things that would not occur in normal physiological conditions”, she explains.

“In the event of a failure in the collective or individual oxygen supply, or due to adverse weather conditions, the airdrop would have to be aborted. This is a very difficult decision and, therefore, we must be absolutely sure”, says Master Sergeant Andrés Rego, head of the Logistics Support Branch, another experienced black monkey with 21 years' service in the BRI-PAC. “Safety comes first, whether dropping the CRAV or any other parachute unit”, he emphasises.

J. L. Exposito
Photos: Pepe Díaz

Throughout the exercise, nearly 1,500 jumps were performed at different altitudes, with a ceiling of 27,000 feet



At the foot of the runway, members of the Oxygen Section of the Airdrop Company prepare the oxygen supply of the consoles and also the hoses to which the paratroopers will connect inside an A400M.