

# C-17 GLOBEMASTER PROJECT

## MULTINATIONAL C-17 FIRST TIME ON AIR SHOW

During the Royal Netherlands Air force 2011 'Open Days' our Dutch correspondents had the opportunity and scoop to be present at the landing of the Hungarian registered C-17 Globemaster at Leeuwarden Air Base. This airplane is part of a shared project joined by several countries forming a fine partnership, where the people behind this are professionals and very dedicated to their work. Their mission brought the Globemaster from the European Strategic Airlift Capability (SAC) to the Netherlands where it could be proudly presented for the first time. Also the crew on the C-17, eager to visit the open days was for the first time during a mission an entire Dutch crew. It was also a mission for the first time operated by a crew from one specific country.

## WHAT IS SAC?

The SAC is an organisation founded in 2006 in order to bring with this initiative a solution for the long distance transport needs of several European countries while operating in a partnership and operating effectively with reasonable costs. The available transport of this type before 2006 was arranged in the Strategic Airlift Interim Solution (SALIS) signed by 18 countries and strategic airlift was provided by Antonov An-124-100's of a civilian company. These aircraft transported many goods to Afghanistan and back to Europe, but high costs for the lease of those aircraft were presented. Ten NATO countries plus two Partnerships for Peace (PfP) countries have signed a memorandum to participate in the SAC to manage and support the newly acquired aircraft. Within SAC a wing was formed called Heavy Airlift Wing (HAW) operating three C-17 Globemaster heavy cargo planes with mixed personnel of all participating countries. Acting centrally as much as possible the base Pápa in Hungary was chosen as home base of the three C-17's and starting with only the most elementary supplies.

The planes are certified, registered, and flagged by the Republic of Hungary. Consequently the markings on each aircraft tail include red, white and green stripes from the Hungarian flag and the name of the host air base Pápa painted against a blue background. On the nose, SAC aircraft display a two-digit number indicating the order of joining the fleet. The first C-17 became operational at 27 July 2009. Crews are admixed at much as possible to learn from each other and create a uniform way of working. As it comes to for instance the Dutch crew, they delivered four pilots and already a fifth is coming up, and other crewmembers such as three loadmasters, two Flying Crew Chiefs, three flight dispatchers, and other positions such as intel, logistic, life-support, communications with the home country (C2-cell) and administration positions are manned by Dutch as well. Second in command at the moment is Colonel Frank Rombouts from the RNLAF who will take the first position in future. A rotational system is used for the occupation of high level positions.

## TACTICAL AIRPLANE

Every country spends defense budget, but will never own the plane. The total amount of hours which can be acquired depends on the budget a country wishes to spend. The SAC participating nations contribute personnel to this military structure in direct relation to their share of flight hours. The Netherlands are contributing for 500 hours. Also the responsibility for the maintenance is taken commonly, where there has been taken a period of 30 years life preliminary. How this works is a question we submit to the crew. First Lieutenant Anton de Bie in function as flight dispatcher is responsible for the planning and progress of flights and explains that the crew's enthusiasm is so intense because the C-17 is a 'total mission solution'. The C-17 is unlike other aircraft of these dimensions not purely built for strategic missions but can operate as a tactical aircraft delivering cargo, tanks, or pieces of artillery very nearby mission areas downrange. The aircraft has the capability to land on 'dirt strips' which means unpaved ground, just like a Hercules but with the cargo capacity of a Starlifter, you could say a kind of hybrid system.

That is why the Cargomaster earns the nickname 'a Herc on steroids'. An advanced and particularly effective thrust reverse system in the engines makes the braking distance for this giant incredibly short. Of course it is a choice to operate the aircraft in this way. For instance the British use their C-17 in the RAF just for strategic missions. The planes are configured and equipped to the same general standard as C-17s operated by the US Air Force. The HAW crews and support personnel are trained for mission profiles and standards agreed by the countries and capable of performing the entire spectrum of C-17 Airland and Airdrop Mission Capabilities: Day/Night/NVG High/Low Level tactical arrival and departure, assault landing, para-dropping, and aeromedical evacuation operations. The SAC does not require the unanimous agreement of its partners for operations. Each SAC nation effectively owns a share of the SAC aircraft total annual flight hours that it may use at its own national discretion.

With the C-17 a complete new dimension is revealed in capabilities, but also in flying characteristics. Imagine the plane can be somehow flown as a F-16 thanks to fly-by-wire. Pilots do have a stick in the cockpit which is another similarity with this fighter. Operating with a crew of three men (pilot + co-pilot & loadmaster) the C-17 can sustain 18 operating hours and assisted by an additional crew it will be 24 hours. At Full Operational Capability, aircraft and its crew could be tasked, if necessary, to remain away from the Main Operating Base for definite periods of time performing semi-autonomously. The wing started under USAF -rules, while the USA is one of the participants and experienced with operating this type to make the wing operational as quick as possible but of course policies are complying with all twelve participants. The HAW is a charter company for 12 countries! The aircraft are used to meet national and NATO requirements but could also be allocated for UN or EU missions or for other purposes. Anton usually plans on request the composition two days ahead of the mission and discuss the flight with the crew but sometimes the world situation is asking for direct responding and could demand a shortening in the time-path. HAW Command and Control (C2) is in charge of the scheduling of the sorties in response to the nations' requests, The HAW commander reports to the

SAC participating nations with policy oversight and assistance provided by national representatives reunited bi-annually in a SAC Steering Board.

## **MULTI-PURPOSE**

Quite some time the C-17's have been 'down range' of which Afghanistan is an example. In such a case some bullet-proof Kevlar protection is mounted in the plane and next to that the plane is equipped with a self-defense flares system against missiles which makes the C-17 the only plane of this category which is authorized to fly under such conditions. Still a main part of the 'core' activities have a humanitarian character, and examples of this were the commitment with the earthquake disaster in Haiti, repatriating the casualties including the Polish president after the plane-crash in Russia, and recently one of the first support flights in Libya. The principle of swing role is an always recurring ritual, as Anton explains. Almost everything you need is on board to facilitate the plane for transport of passengers in standard configuration for 102 passengers on the side seats which can be increased with more seats centrally up to 174. Also nine litters can be taken and there are special provisions for medevac such as electricity and pneumatics for medical equipment. The medics are very happy with the low-noise quality in the cabin which enables them to communicate very good with patients. The floor is utilized for palletized cargo on floor rollers as well as outsized cargo including wheeled and tracked vehicles like tanks (rolling stock) and even helicopters. However it will take some time all needed for logistical arrangement the average 'turn around time' is 3,15 hours. Plain passenger transport turn around time can even be in one hour! The C-17 is user-friendly and 'weight & balance' proof. The many different faces of his work make it so challenging for a flight dispatcher. While in fact the initial begin 'ops' only just had been completed when the squadron had been starting up, an immediate request came to assist in flying operations to Haiti after the devastating earthquake. All had to be planned very quickly but it turned out to be a very good mission and such things are very satisfactory to the crew and contributes to a high motivation level.

## **CAPTAIN BERLIJN**

Anton de Bie tells us that the C-17 is in his opinion a very fine plane, and the planning and cooperation with the crew is going fine or even outstanding. Captain Christian Berlijn surely agrees with him and while asking he makes a big smile. That is telling us enough. For The Dutch crew it was of course very special to fly in this huge Globemaster in a historical flight to the 'Open Days' forming a specific entirely Dutch crew for the first time. Fourteen men personnel in total including two pilots, two loadmasters, two flying crew chiefs of Netherlands origin, it felt like a 'home-match' and a real kick. Such events you can keep in your memory just like your first C-17 transatlantic flight. A sketch of one of his most recent flights shows his diverse flight schedule. Together with two Polish Co-Pilots from Papa Air force base to Romania where all of a sudden a Chinook helicopter had to be loaded which had to be flown to Fort Campbell in the USA, within 13 hours including an air-to-air refueling operation. The next morning they had to fly back to Romania with all kinds of equipment for the exercise over there. It keeps you in mind that you are doing important work and while flying over the Atlantic it gives you enough time to realize you are the captain of the

ship and giving you a feeling of satisfaction. It will certainly be not the case when flying an ISAF mission and your focus is completely on dangers which could show up. Flying with an international crew is the 'extra' experience for the men. Small differences in culture, but also here is the statement: 'One Team One Mission!'

In the cockpit with many digital techniques and avionics we see a head-up display and operating controls with sticks and instruments which were until recently a privilege for fighter jets. Pilots are qualified by courses and type rating at Altus, Oklahoma AFB at the C-17 Aircraft Education Training Command (AETC) first after reaching much experience on other transporters like the C-130 Hercules. Special training includes air-to-air refueling, low-level navigation and assault landings after which a rec-ride recommendation enables you to certify for the final qualification. Errors in the mission control computer are examined and determined in another computer. This so called Digital Technical Order System (DTOS) is a kind of digital syllabus and it takes care that you keep 'clean hands' in case of technical assistance. A problem is in most cases not mechanical and oil hands like in the Hercules are old-fashioned, but sometimes problems occur in software and actions can be special inputs or resetting systems, a troubleshooting on the screen of the computer. However when the fly-by-wire should fail there is conventional manual system as back-up to control the aircraft. The C-17 Globemaster, a very good buy as the insiders stated and a feast to work with ! We'll be seeing more of the plane in future, that's for sure!

Participating countries in SAC:

NATO:

Bulgaria - Estonia - Hungary - Lithuania - Netherlands - - Norway - Poland - Slovenia  
Romania - United States

PfP countries:

Finland - Sweden

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Kees Otten, Wim Das & Koos Heemskerk

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