Steps forward for the Italian digitized infantry

Funding for Forza NEC (Network Enabled Capability), the Italian Army's digitization programme, has recently been confirmed by Undersecretary for Defence, Guido Crosetto and in February and March two important milestones in the Soldato Futuro programme were achieved

At Montelibretti on 17th February this year, the Army received its first Freccia 8x8 wheeled armoured infantry fighting vehicle (AIFV), which is the first such vehicle to be developed from scratch, according to the Army Digitization Programme. One and a half months later, on 30 March, the Ground Armament General Directorate officially presented the new assault rifle, the Beretta ARX-160, which will equip the Soldato Futuro ensemble.

The Freccia has a gross vehicle weight of 30 tonnes, including eight tonnes of payload, part of which can be used to increase the basic ballistic, anti-mine and anti-IED protection; in the Italian Army's current configuration, the Gross Vehicle Weight is 28 tonnes. Powered by an Iveco 8262 diesel engine, providing 550 hp, it can reach over 105 km/h. The Freccia is equipped with an OTO Melara Hitfist Plus turret, armed with a Rheinmetall 25 mm cannon.

The turret hosts all the platform's communications, which vary from five to seven radios according to the role within the infantry regiment. The basic vehicle for the infantry team is equipped with five radio sets: a wide band HCDR (High Capacity Data Radio), a VHF SINCGARS radio, a CNR 2000 HF radio, and the two radios which provide the link with the Future Soldier, the 2.4 GHz WiFi radio and the 900 MHz ViSSR (Vehicular Integrated Soldier System Radio). The platoon commander vehicle is equipped with a second SINCGARS, while the vehicles assigned to the company second in command and the company officer in command each feature a UHF Have Quick radio to allow them to talk to fixed and rotary wing aircraft. In the future these last two vehicles will receive a SATCOM on the move solution while the Army also intends to merge the two Future Soldier radios currently installed on the Freccia. The vehicles have been assigned to the 82nd Infantry Regiment, part of the "Pinerolo" Brigade which will become the first Italian Army Medium Brigade. Its 1st Company will be part of the Digitisation Experimental Unit based in Altamura, southern-Italy which is tasked for testing the Forza NEC equipment. Each regiment will deploy about 70 Freccias in five different versions; AIFV, antitank, mortar carrier, command post and recovery; currently 54 vehicles have been ordered and 109 more should receive funding shortly to complete equipping the 82nd regiment and to re-equip the 9th Infantry Regiment, in the same brigade.

The turret of the antitank version of the Freccia is equipped with the Janus indipendent commander's sight which will also equip the company commanders' vehicles. © P. Valpolini

The 82nd Infantry Regiment is also going to receive the first 30 Soldato Futuro kits. The pre-production batch has been divided in two sub-batches. "If we consider the first three prototypes the 1.0 release, then the first 30 kits, which are being delivered, can be considered the version 1.1 release," Major General Adriano Vieceli, head of the Army Logistic Division, told Soldier Modernisation. "The second batch will be produced following the platoon level operational testing and could be defined as release 1.2. After further testing the initial configuration, which should be defined as 2.0, will be ►

frozen and the production of the first batch of 1,500-1,800 kits will be launched. These kits will then equip the 82nd and 9th Infantry Regiments within 2011.

Soldier Modernisation understands that not all the infantry team members will receive the full kit, and that the exact equipment for the team will be decided following the final testing. The only piece of kit which has already been fully pre-produced is the ARX-160 rifle. Beretta has already delivered more than 92 of the rifles, some of which have already been assigned to the "Folgore" Parachute Brigade, currently deployed in Afghanistan, which is carrying out operational testing downrange.

The rifle development started in 2004 with an investment of about €15 million, €4 million coming from the Ministry of Defence. The ARX 160 is a gas operated weapon with a rotating bolt with seven lugs. Beretta put considerable efforts in the tolerance and material studies and came up with a weapon which doesn't need any lubricant. This is especially relevant when employing the ARX160 in dirty, dusty and sandy areas, where stoppages can be caused by dirt, moulded with lubricant. Tests in difficult conditions, such as firing the rifle after immersion in salt water were completely successful. The other strong point of this weapon is the fact that it can be quickly reversed from right-hand to left-hand mode: the ejector window can be reversed simply using the tip of a round to press a push-button located over the selector, while the cocking lever can also be reversed in very short time by hand. This allows to quick adaptation of the weapon from right to left-handed usage, a feature which can be of use in an urban scenario. The 16" barrel can be quickly changed with the 12" short barrel which is currently undergoing final qualification tests. Pressing two locking bolts, located forward on the receiver, the barrel can be replaced in about five seconds. The weapon's selector has three positions; safe, single shot and automatic fire. Compared to most current assault rifles, in which the selector rotates 180°, that of the ARX160 rotates only 82°, thus reducing selection time. To adapt the rifle to the soldier's individual height, the butt can be folded on the right side while the buttstock can be adjusted in four different positions.

The Beretta GLX-160 grenade launcher has been adopted by the Italian Army which is using it on the Beretta 70/90 rifle; a special interface is used to attach it to the weapon. © P. Valpolini

The rifle butt can be folded on the right side, while the butt stock can be adjusted in four different positions. The rifle uses NATO 4179 STANAG magazines although Beretta has also developed a polymeric magazine which can be used without any modification and weighs only 120 grams empty, compared to 180 grams of the aluminium magazine and 240 grams of the steel one. Compared to the older Beretta 70/90 the new rifle weighs over 1 Kg less, at 3.1 Kg with the 16" barrel and without magazine, mostly thanks to the use of polymeric material for many components. Four Picatinny rails are available, on the top for hosting aiming sights, two side mounts and a lower one, which is also used to install the GLX160 single-shot grenade launcher. The latter is considered to be a lightweight solution of its kind, with a weight just under 1 Kg. The ARX160 has been designed for use with the Aspis optronic sight of the Soldato Futuro developed by Selex Galileo, but it retains the flip-up iron sights as back-up solution. The Beretta ARX160 can be field stripped without any tools and the rifle is subdivided in just three components, and no pins are used for assembly, the system relying solely on joints.

According to company sources, the rifle has a price of €1,500-2,000, and Beretta is able to produce some 30,000 items annually. Albanian Army special forces were the first customer, acquiring an undisclosed number of rifles, followed by Mexico, which should receive 3,000 ARX160s by year end, following the transfer of 4,000 AR 70/90s in 2007 and 2008. In addition, the Egyptian Police is a Beretta customer for the AR 70/90 and within year end will receive a first batch of 500 ARX160s. Awaiting the Italian order, Beretta promoted its rifle at IDEX in Abu Dhabi where it attracted considerable interest. Trials in the US, with the Army and Marine Corps, in South Africa and in Saudi Arabia were also carried out with success. ■

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