



Approved for Public Release



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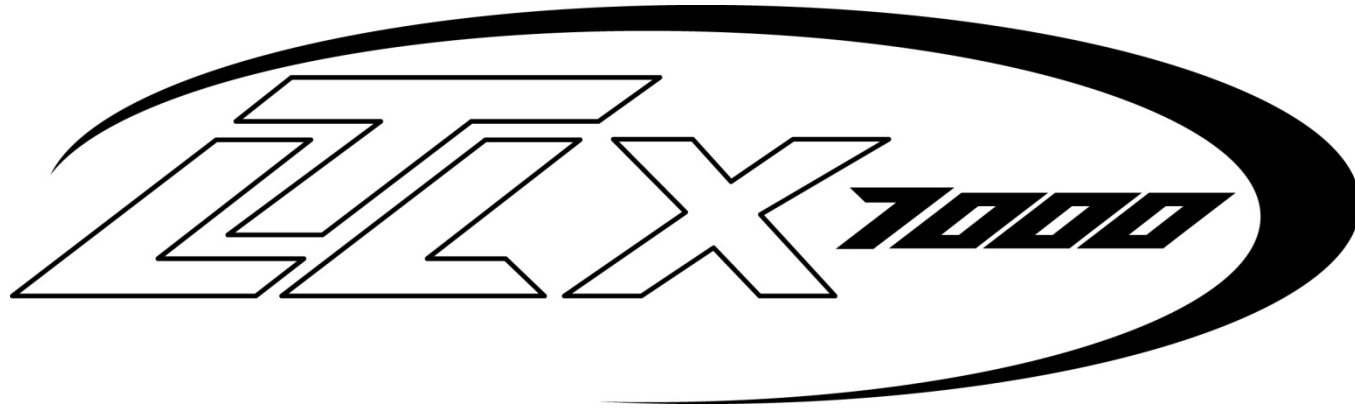
**Less Than Lethal Project ,  
a further option for the  
challenges of the future**

**A Joint program between the  
Italian Ministry of Defence and  
Fabbrica d'Armi Pietro Beretta spa**





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- Beretta in the “ Less than Lethal program “
- Our targets
- Technological Demonstrator
- Human Engineering e Integration

# Beretta in the Program “Less Than Lethal “

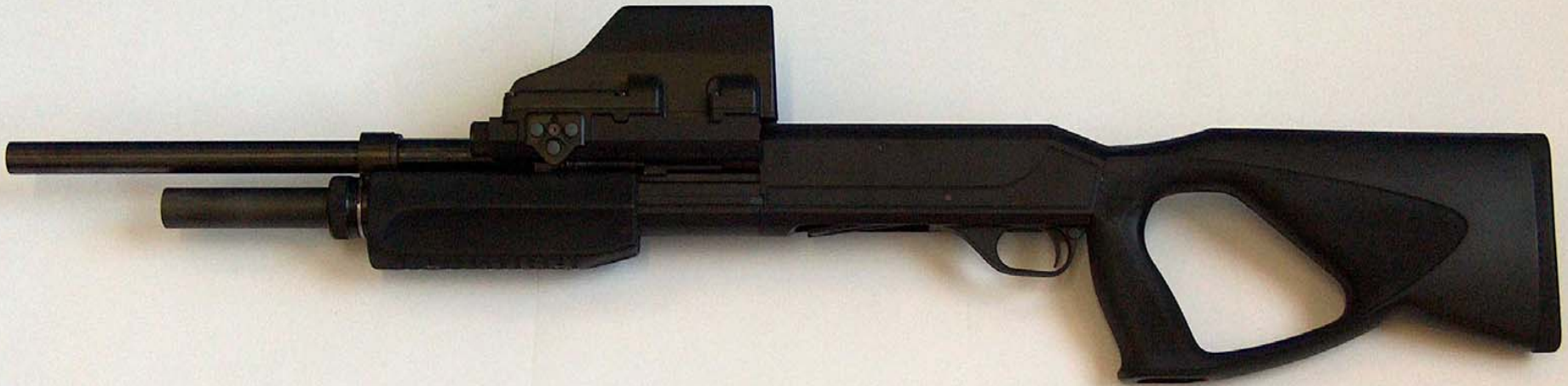


- The Italian Ministry of Defence launched in 2001 a R&D program called “ **Less Than Lethal** “ to complete its effort of enhancing the combat capability in peace keeping and international police operations within the innovative program “ *Soldier of the Future* “ .
- December 2002. A contract was signed between Beretta and Italian M.O.D. for the development of a technological demonstrator of a Less Than Lethal weapon system.
- April 2006 : The first three technological demonstrators have been successfully tested and accepted by the Italian Army .
- 2007 : user trials to be carried out for doctrine assessment of use of LTL weapon system .
- 2008: Limited fielding of the system within the IMOD

# Technological Demonstrator



- A more ergonomic design study which includes a collapsible/ foldable stock is foreseen for the production runs

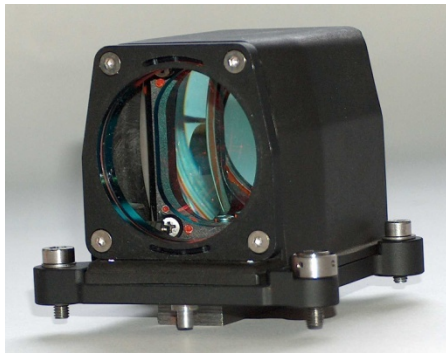




# The sub systems



launcher



Sight / Range finder



Ammunition



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# Our targets

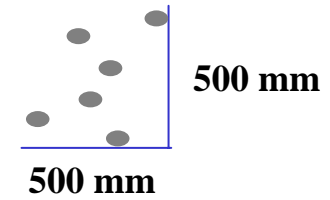
To develop a technological concept which will include a launcher , a dedicated ammunition and optical sight for a less than lethal weapon system to demonstrate the possibility to deliver the same kinetic energy within a range from **15 meters** (49.3 ft ) up to **70 meters** (230 ft ) :

- Ergonomics ( similar to a traditional shotgun)
- Blunt trauma analysis ( for effective less than lethal capability )
- **Constant Kinetic Energy principle using traditional propellant ammunition**
- Basic and cost effective range estimation system.

# External ballistics

Accuracy :

*Target*  $H+L = 1000 \text{ mm}$  ( at 70 meters )



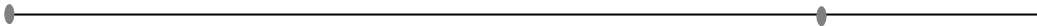
230 ft

49.3 ft

70 mt

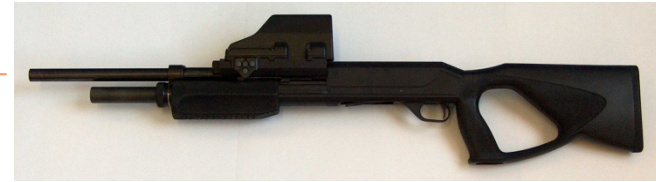
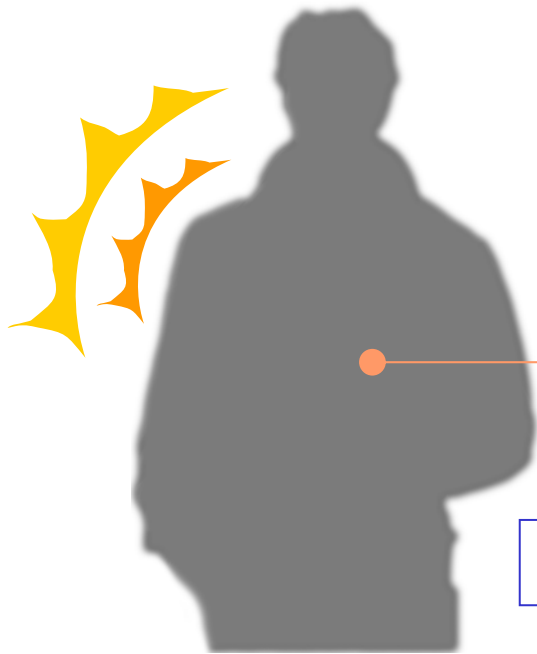
15 mt

0



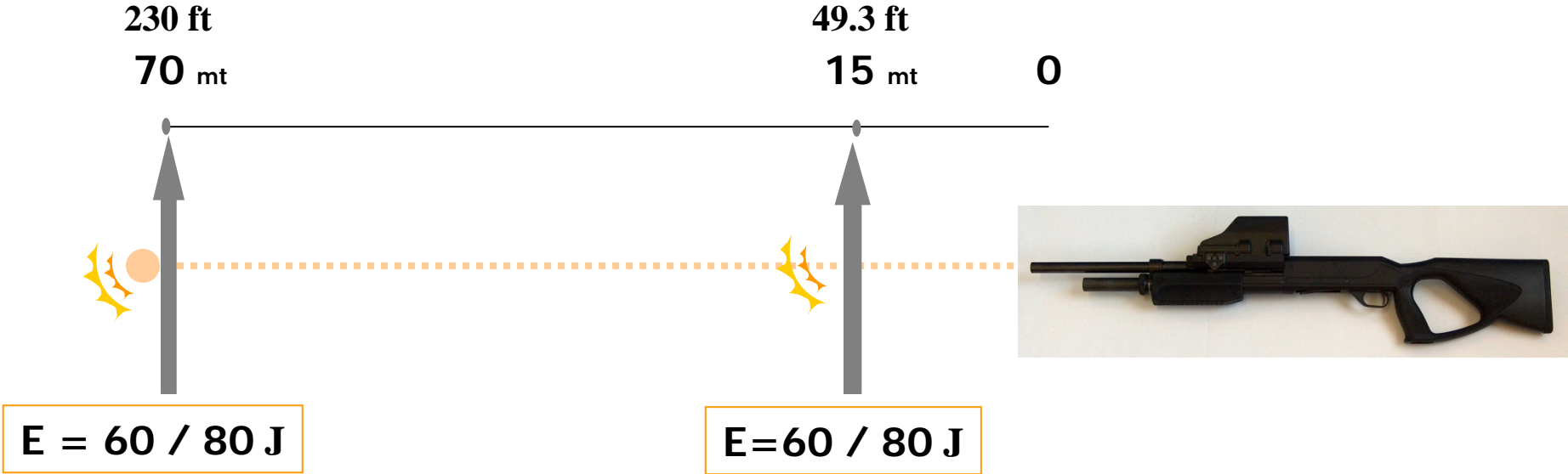


# Terminal ballistics, blunt trauma analysis



Max E less than 60 ÷ 80 J

# Constant Kinetic Energy principle



# HDSSP projectile

## High Deformation Spin Stabilized Projectile



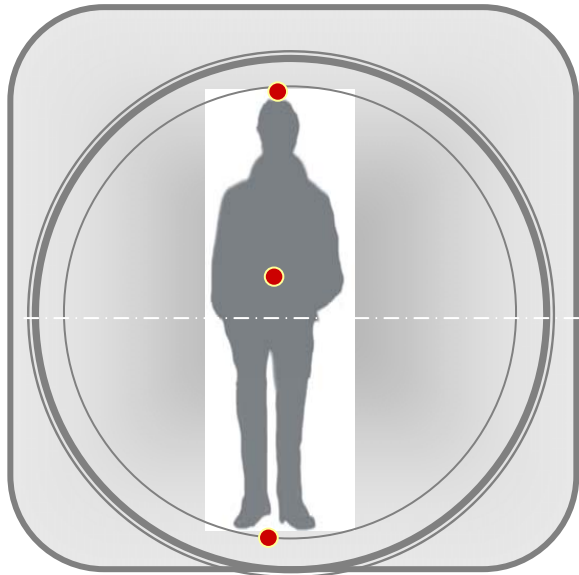
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# Range estimation

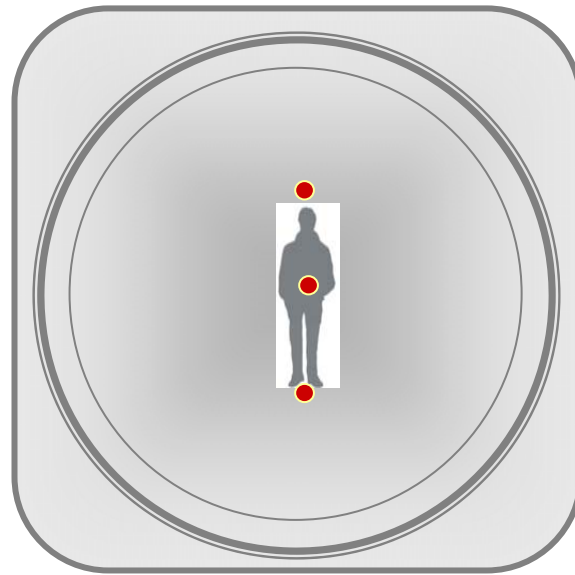
49.3 ft

**15 meters**



**70 meters**

230 ft



# Constant Kinetic Energy principle

