

:WHITEPAPER:



Materials and Construction
Of
iCOMBAT Products

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SUMMARY

iCOMBAT gear is made up of the highest quality materials in order to provide supreme durability. Each product has been rigorously tested to ensure a long life under most usage conditions. We understand that products often go through harsh use during their lifetime and we kept that in mind as construction began. iCOMBAT products are made for law enforcement and military entertainment, an industry where reliability is key. The high quality and rugged materials used in the construction of iCOMBAT products will keep them functioning for years to come.

Product

irM4

The iCOMBAT irM4 consists of several high quality materials in order to provide a reliable, yet user friendly experience. The receiver is made of cast aluminum. This gives the gun the majority of its weight and can withstand harsh use. It holds and protects the internal electronics and all accessories attached such as stocks and sights. The aluminum receiver also has an anodized black finish for a pristine look and added resistance to the elements. Connected to the receiver is a glass-filled nylon grip. Glass-filled nylon is an extremely durable material that is light in weight but can handle the pressure thrown at it. The barrel of the irM4 is blued stainless steel for weight and superior strength. It houses a snug section of electronics that lie in a module for easy swapping if the need ever arises.

The internal components are made of stainless steel and aluminum for minimum wear. The gun can be cycled hundreds of thousands of times without issue. The electronics are covered with a moisture resistant coating. This means the gun can be used without fail in extreme hot, cold, wet, or dry environments.

Accessories on the irM4 are left up to the user but the standard CAR stock and carry handle sight found on the tactical version are those that are found and used on real firearms. They are extremely durable and used in battle zones all around the world.

SmartMag

The iCOMBAT SmartMag's construction is relatively simple, which contributes to its solid design. The clamshell design holds the electronics and components securely inside, and also allows for quick maintenance should the need ever arise. Both halves are made of glass-filled nylon. The SmartMag can be dropped hundreds of times just as a real magazine would. It's made to withstand the same conditions as an aluminum magazine and parallels the common tactical waffle magazine.

The stainless steel valve is secured in a way that prevents its removal without opening the two SmartMag halves. The valve assembly consists of several durable orings and springs to allow pressurized gas out when inserted into the irM4, but also seal off when the SmartMag is removed from the gun. The valve is able to absorb the shock and hit if the mag happens to land on the valve face.

Twelve ounce CO2 cylinders are inserted into the SmartMag via the side door. This door swivels on a stainless pin which is virtually unbreakable. The door features a stainless roller bearing for securing the cylinder as you snap the door shut. Detents on the SmartMag hold the cylinder in place even in the unlikely even that the door pops open and the pressure is released.

The electronics inside of the SmartMag are also covered in a water resistant coating to allow the mag to be used in all the same places as the irM4, which you would expect.

irVest

The irVest features a standard full-body MOLLE vest with advanced electronics built into it. MOLLE material is made of durable stitched nylon meant to support heavy weights in most environmental conditions. Nylon webbing is placed throughout the vest for allow the attachment of various pouches and accessories. The irVest is lightweight while still being extremely durable.

On the backside of the irVest, is a pouch containing the control box. The box casing is made of glass-filled nylon to resist impact and protect the circuitry inside. Each sensor and beeper on the vest is wired to the control box and can be disconnected simply by unplugging the jack. This prevents broken wires and allows the user to exchange sensors and beepers easily, no matter what the reason. The receivers and LED's of each sensor or beeper are housed in tough, translucent, red plastic that are highly impact resistant. The irVest can be worn by users in any position against any surface. The electronics and control box are water resistant.

Weights and Measurements

The irM4 tactical version weighs 5.9 lbs with no magazine inserted. It measures 33 inches from the barrel tip to the rear of the stock when fully extended.

The SmartMag weighs about 1 lb with a 12 gram CO2 cartridge inserted.

The irVest weighs approximately 3.5 lbs with no extra pouches.

The irHarness weighs approximately 2.2 lbs with no extra pouches.

For more information on the durability or construction of iCOMBAT products, please visit www.iCOMBAT.com or call 888-950-1221.

References

MOLLE Gear. January 2011.

http://en.wikipedia.org/wiki/MOLLE_%28military%29