

LESS-LETHAL

# FN 303

## Less Lethal Launcher

By Don Munson

FOCUS



One of the dilemmas with less-lethal alternatives has been range and accuracy. Of the suspects engaged by officers using less-lethal munitions, 19% were between 21 and 42 feet away, while 20% were beyond 42 feet. A less-lethal launcher that is both accurate and effective at longer ranges is definitely needed. In these less-lethal scenarios with 12-gauge, 37mm and 40mm impact munitions, 22% of the time two shots were fired, and 18% of the time three shots were fired. A less-lethal launcher capable of fast follow-up shots is also clearly needed.

The FN 303 Less Lethal Launcher addresses these issues by combining the abilities of an impact projectile that is fin stabilized with a compressed air launcher. The FN 303 straight from the box is totally modular and easily assembled within a minute without instruction. Actually, FNH USA ships the weapon without manuals or instructions. These are delivered at the FN 303 user training course. The message here is you shouldn't be using something with which you are not properly trained.

The FN 303 is constructed of a lightweight durable polymer. The overall design of the weapon is ergonomically pleasing and comfortable to hold. The FN 303 consists of four major parts—stock, receiver, air tank and magazine. The stock slides into the top rail of the receiver and locks into place. The air tank snaps onto the right-hand side of the forward section of the receiver. There is a small airline that attaches the receiver to the air tank by a quick coupler.

The modular FN 303, less the stock, can be easily attached to a lethal weapon such as the AR-15 pattern patrol rifle.

The 15-round drum-style magazine has a clear back for easy ammunition identification and round count. The magazine fits easily into the magazine well with the release molded into the front forearm of the receiver directly in



*The FN 303 easily put projectiles on a full-size mannequin from the maximum engagement range, and it did it at the rapid-fire rate of one shot per second.*

front of the magazine. The magazine can be loaded by hand within just 20 to 30 seconds. Magazine changes were accomplished in 3 to 5 seconds.

The FN 303 operates off of high-pressure, low-volume compressed air. Air tanks can be filled at any SCUBA supply outlet by a fill valve adapter attached to a large SCUBA tank or by FN's gas-powered portable compressor. On one full tank (3,000 psi) of air, the weapon is capable of firing about 110 rounds. There is a small valve and gauge on the weapon-mounted tank to allow for charging of the weapon and easy identification of the need for air refills. We used a fill adapter to fill our tank.

The gauge's green pressure range shows 3,000 psi to 1,000 psi with anything below that considered low pressure. FN 303 would cycle below that range down to about 600 psi. In these ranges, the weapon had noticeably less force behind the projectiles on impact. In the lower-pressure range, at the 50 meter maximum recommended range, a few of our projectiles failed to break on

impact with our rubber target mannequin.

It should be noted that it is necessary to fill the small weapon tank slowly otherwise the tank will instantly heat up and greatly reduce the capacity of the tank. In an individual perpetrator encounter, one full tank would be more than adequate, but in a riot situation, the portable air compressor would be a must. If your budget cannot afford a compressor, then multiple weapon tanks would be a very viable option.

The FN 303 has a trigger guard safety. By slipping your finger between the trigger and safety, you can push the safety forward. We loved its simple, easy design. The only thing we noticed was that even with the weapon charged, the trigger sometimes would not go to its fullest forward position to allow the

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*The FN 303 operates off a high-pressure, low-volume compressed air tank filled from a SCUBA tank.*



*Magazine changes take about 3 seconds. Loading a new magazine takes about 20 seconds.*

re-engagement of the safety without a little help.

We left our FN 303 in the trunk of a patrol car for a month with the valve off and the tank charged. It maintained its air charge with no visible decrease in pressure. At freezing temperatures, it came straight out of the trunk and performed flawlessly. During our testing, the majority of our days were right around freezing, but the FN 303 showed no adverse effects associated with the cold.

The weapon comes with a metal flip-up rear peep and front post sights. The sights were not adjustable, but there is a top rail system that could easily accommodate any aftermarket light or sight systems. The sights were rather taller but were still accurate for the amount of offset from the barrel bore.

Using the fixed, factory sights, the point of aim versus the point of impact was consistently high and to the right by about 6 inches at 40 meters. We were able to send an endless barrage of projectiles with consistent solid torso strikes at this same range. The visible flight path of each projectile allowed for even quicker aim adjustment during rapid firing.

The FN 303 Launcher grouped six rounds into 5 inches from 75 feet (25 yards). From its maximum recommended range of 165 feet (55 yards), the FN 303 easily put all the projectiles on the torso of a life-size mannequin. In fact, it put the projectiles on the target in the rapid-fire rate of about one shot per second. In comparison, the shotgun-fired impact munitions are not as accurate.

Based on Los Angeles County Sheriff testing, from 75 feet, the average

The reason the projectiles are so accurate is due to their plastic cone shaped design that incorporates a rear fin that is molded into the sides of the projectile similar to a sabot shotgun slug. The projectiles utilize a fin-stabilized polystyrene body and non-toxic bismuth forward payload. The projectiles break upon impact, minimizing the risk of penetrating injuries, and the blunt impact serves to deter aggressors. Secondary effects can be delivered by the projectiles via rear payloads. For example, three versions of the projectiles are now in the U.S. Army inventory.

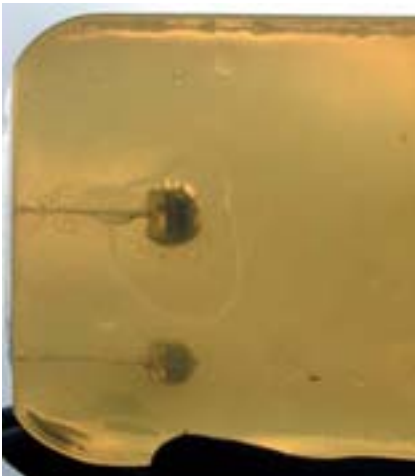
The projectiles come in several different types and color-coded varieties. We tested the clear impact projectile, pink marking paint and orange OC projectiles. The colors are clearly and distinctly visible through the clear backing of the magazine. FNH USA recently upgraded from oleoresin capsaicin (OC) to pelargonic acid vanillylamide (PAVA). This irritant uses Capsaicin II, a synthetic version of OC, which is reported to be more than two times hotter than OC, and has a longer shelf life.

The projectiles are frangible and weigh 8.5 grams. The FN 303 projectile has a muzzle velocity of 290 to 300 fps and a muzzle energy of 24 to 25 ft/lbs.



*The FN 303 Launcher is made up of the stock, receiver, air tank and magazine. Without the stock, the launcher easily attaches to an AR-15.*

square pad beanbag grouped into 21.6 inches, while the average sock-type beanbag grouped into 17.5 inches. Of all 12-gauge, 37mm and 40mm impact munitions, 46% grouped into less than 18 inches, 30% printed between 18 and 36 inches, and 24% were off the 36-inch target. Again, at this 75-foot range, the FN 303 grouped into 5 inches.



*Virtually all less-lethal munitions produce some penetration in gelatin. The FN 303 is best suited for longer range engagements. Accuracy and range are the strengths of the FN 303.*

To put this in perspective, that is about twice the energy of a PepperBall projectile and about one-fifth the energy of a shotgun beanbag. The increased striking power of this weapon is noteworthy and not without due caution. The factory advised the minimum safe distance is 3 feet if you target the thigh.

The Individual Serviceman Non-Lethal System (ISNLS) is an evolving non-lethal weapons concept currently supported by this commercial, off-the-shelf, FN 303 Less Lethal Launcher. The primary purpose of the ISNLS is to give the individual warfighter the ability to engage targets with non-lethal force at greater distance and accuracy than is currently available. As part of the ISNLS program, the FN303 Less Lethal Launcher has undergone extensive human effects testing.

Testing and analysis has been performed by the Human Effects Center of Excellence at the Air Force Research Lab to characterize and understand the blunt trauma effects of the projectile at various engagement ranges. The testing, which has been reviewed periodically by the Human Effects Review Board as part of normal program practices, ensures that proper operator training and safety margins can be implemented between what is operationally effective and any potential injurious effects.

From 15 feet, we found the FN 303 projectile penetrated 2.5 inches of T-shirt-covered, calibrated ordnance gelatin. Some penetration is both permitted and expected since virtually all impact projectiles, including beanbags and rigid batons, penetrate some amount of gelatin.



The rule of thumb used by some less-lethal munitions manufacturers in the late-1990s and early-2000s to develop shotgun-fired beanbags called for a maximum penetration of 2 inches from 15 feet. More penetration than this does not mean the FN 303 should not be used! It simply identifies it as one of the impact munitions better suited for longer ranges with an elevated risk at closer ranges. As such, extreme caution should be used at engagement distances closer than 15 feet.

The FN 303 is so accurate, and the retained energy and momentum is so good, there is no tactical reason to get

closer to the subject than 15 feet. At 55 yards, the FN 303 projectile still has 33% more energy than the PepperBall projectile has at the muzzle. Again, the FN 303 is so accurate compared with all other impact munitions that thigh and buttocks shots are quite possible even under somewhat fluid and dynamic situations. The head, neck and groin should never be targeted for the use of less-lethal force.

The FN 303 is a reliable, well-built, accurate less-lethal alternative. With multiple projectile options, it gives operators plenty of options for any situation. The key is that it needs to be used by properly trained officers who are fully aware of its capabilities.

*Don Munson is a deputy sheriff with the Benton County, IN Sheriff's Department, and he is point man with his multi-agency response team. He can be reached at donmunson@sbcglobal.net.*



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*The FN 303 projectiles include clear impact, washable pink and yellow permanent paint. The orange OC projectile (not shown) has been upgraded to PAVA.*



*The FN 303 is a reliable, well-built, and very accurate less-lethal option. The FN 303 should only be deployed by someone fully risk trained in its capabilities.*