Military Testing – The Middle East

Featured in “Sword Buyers Guide”
Review: RazorRazor BeltSword Weapon System

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Review July 2011 by Jonathan Sarge from SBG (Sword Buyers Guide Forum)
Testing was conducted in the Middle East during wartime
Jonathan Sarge has served as a Department of Defense contractor under CENTCOM in the Middle East. Since the late 80’s, he has served with the United States Army as a military police officer, and worked as civilian law enforcement officer and investigator. He has a martial arts background as a student in Jeet Kune Do, Kali-Escrima, military and law enforcement defensive tactics, and as an instructor in Italian Two-Handed swordsmanship. Jonathan is an avid collector of Medieval European weaponry and armour, in addition to being well-founded in the antiquities community. He is also known as an unbiased, practical reviewer of quality-made swords from around the world.

Review: Razor-Razor Belt Sword Weapon System by Odingaard » Fri Jul 15, 2011 9:38 am

Introduction

The Razor-Razor Belt Sword has been the point of some controversy within the sword community for a few years now. Sword enthusiasts are on either side of the fence in wondering whether or not to consider the belt sword a novelty item or an actual weapon. After some heated exchanges in various forums about the Belt Sword, I decided to write Razor-Razor company owner, Curtis Koehler, to see if he would be willing to donate a sample for testing. Perhaps, these tests could at least establish a baseline for a product not many people were familiar with in the community.

Historical Overview

Actually, the Razor-Razor Belt Sword is not the first flexible and concealable cutting weapon devised in history. There have been a few others historically. I have seen versions of antique belt swords from China and Tibet; but these do not seem as if they were as concealable or easy to draw as the contemporary counterpart is advertised to be. Additionally, they maintained a curved shape after being drawn; making them difficult, if not impossible to fight effectively with. From India, there was the highly-flexible Urumi; made from thin strips of serrated steel and paired with a buckler. Though this weapon can cut well, it seems to handle more like a whip than a sword with no thrusting or CQB ability. The art used in wielding the Urumi is still practiced today as a cultural art in India – videos can be found readily on the Internet.

There are a few historic precedents for the Belt Sword, but the Razor-Razor product seems a distant relative, with not much similarity other than having a handle and a flexible blade.

Full Disclosure

After corresponding via email and telephone with Curtis Koehler of Razor-Razor, he agreed to allow me to test his product and publish the results in the forums. Curtis sent me a total of 4 RazorSwords along with one Belt Sword containment system. The products were sent to me at my current duty station in the Middle East. I was not charged for the testing samples themselves or the shipping.

Initial Impressions

When the Belt Swords arrived at my APO address; they were safely packaged in a sturdy cardboard tube. They were tightly wrapped in newspaper and plastic wrap, which it took me some time to unwrap (I did not want to cut myself). There was no damage to any of the contents of the package and everything which was included with the package arrived intact.

The initial impression when handling the various Belt Swords was…

“Yeah, these things are definitely able to cut...”

The feel is quite different from a European or Asian blade, but it was easy to tell that the blade would perform somewhat as a sword would.

Statistics

There were 4 RazorSwords to be reviewed, so the data will be entered as a spread.

Overall Lengths: Between 33.0” and 27.0”

Handle Lengths: Between 8.0” and 12.5”

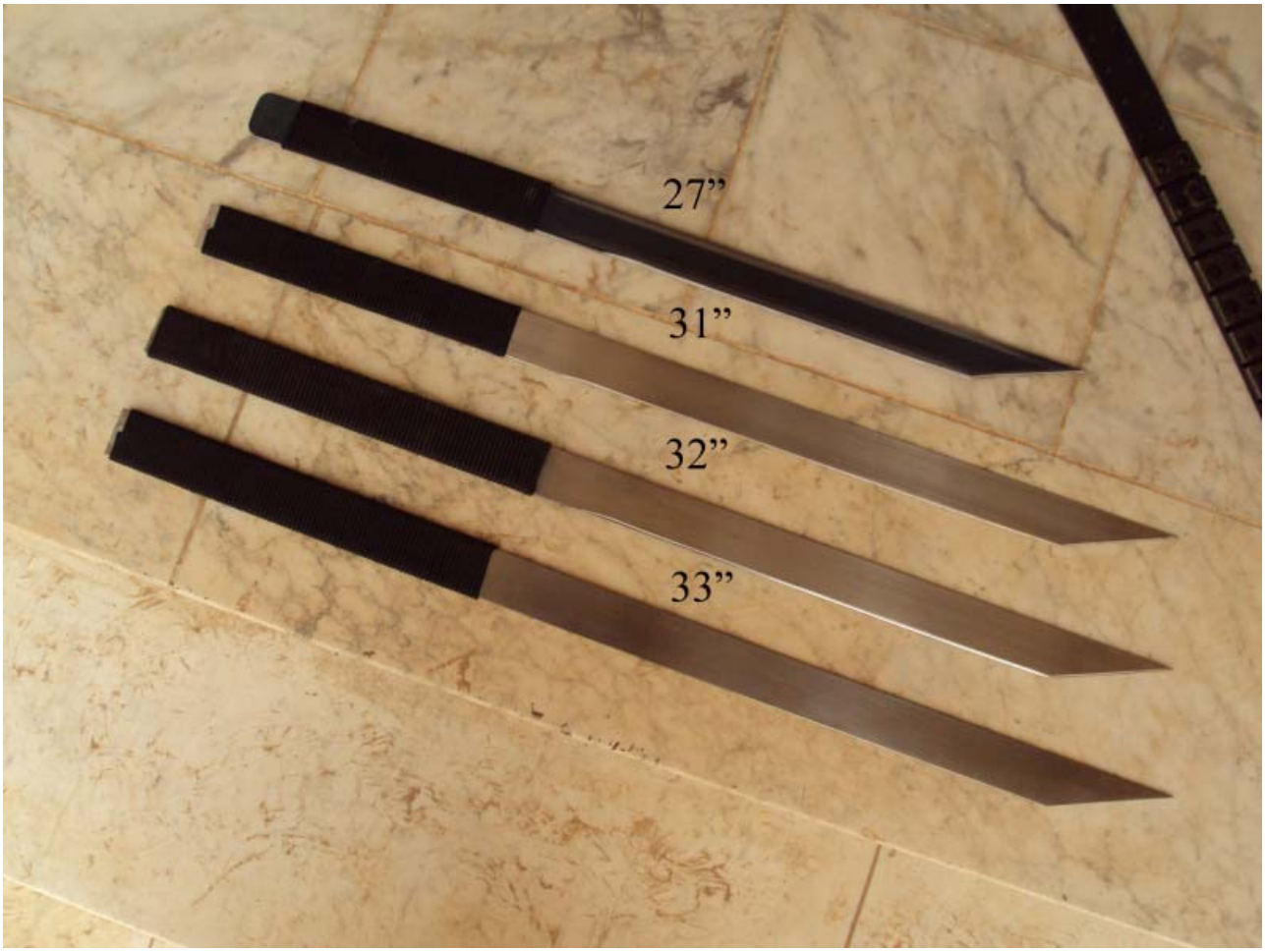
Blade Thicknesses: Between .042” (mono) and .084” (laminate)

Material: Heat-Tempered 1095 High Carbon Steel

POB (Point of Balance): Approximately one-half of the overall length on all models.

COP (Centre of Percussion): Varies from 16.0” to 22.0”

Weight: Varies, on average around 18oz.



The Blades

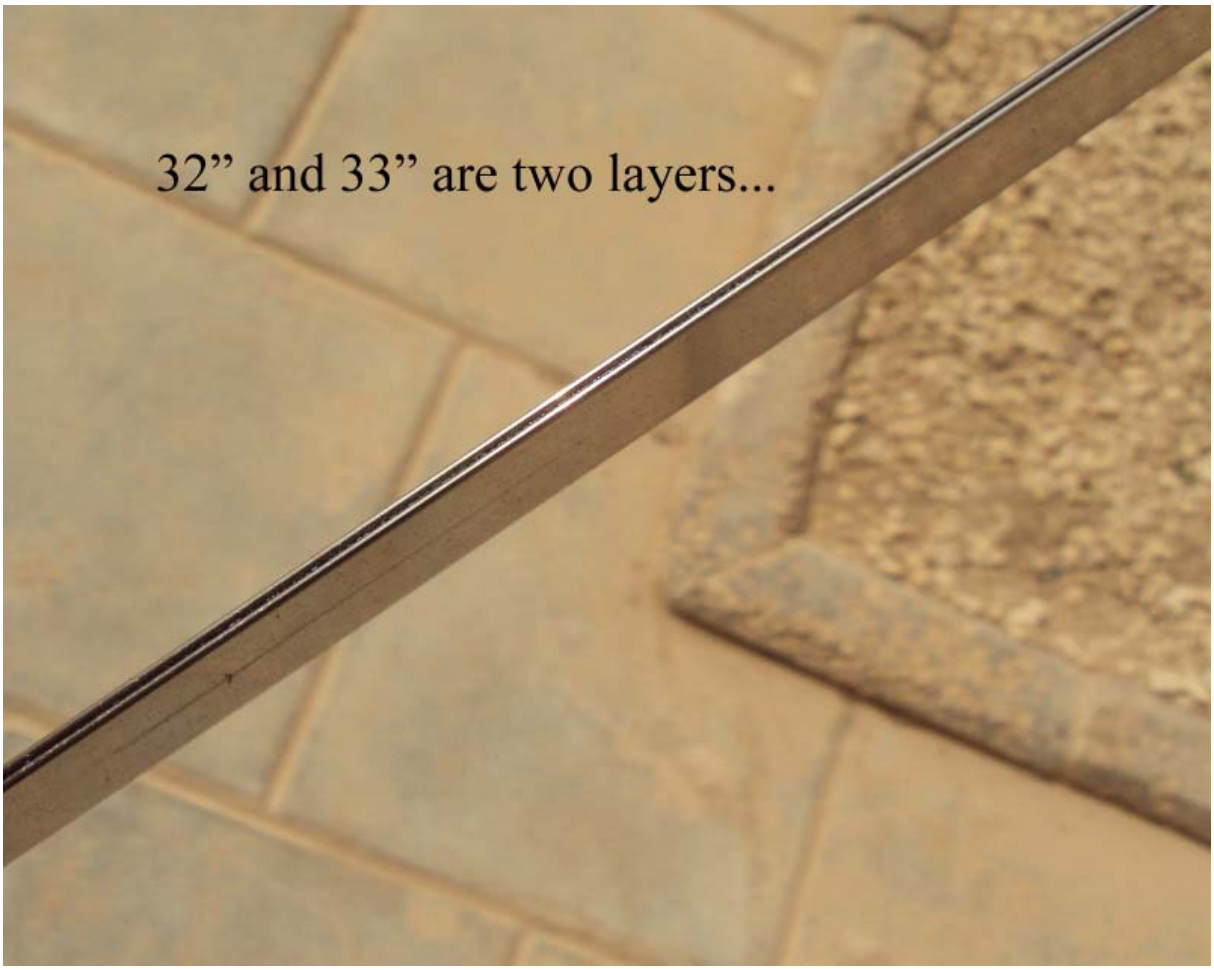
Despite what many believe, there have been several different types of Belt Sword blade manufactured by Razor-Razor. These are split into two families:

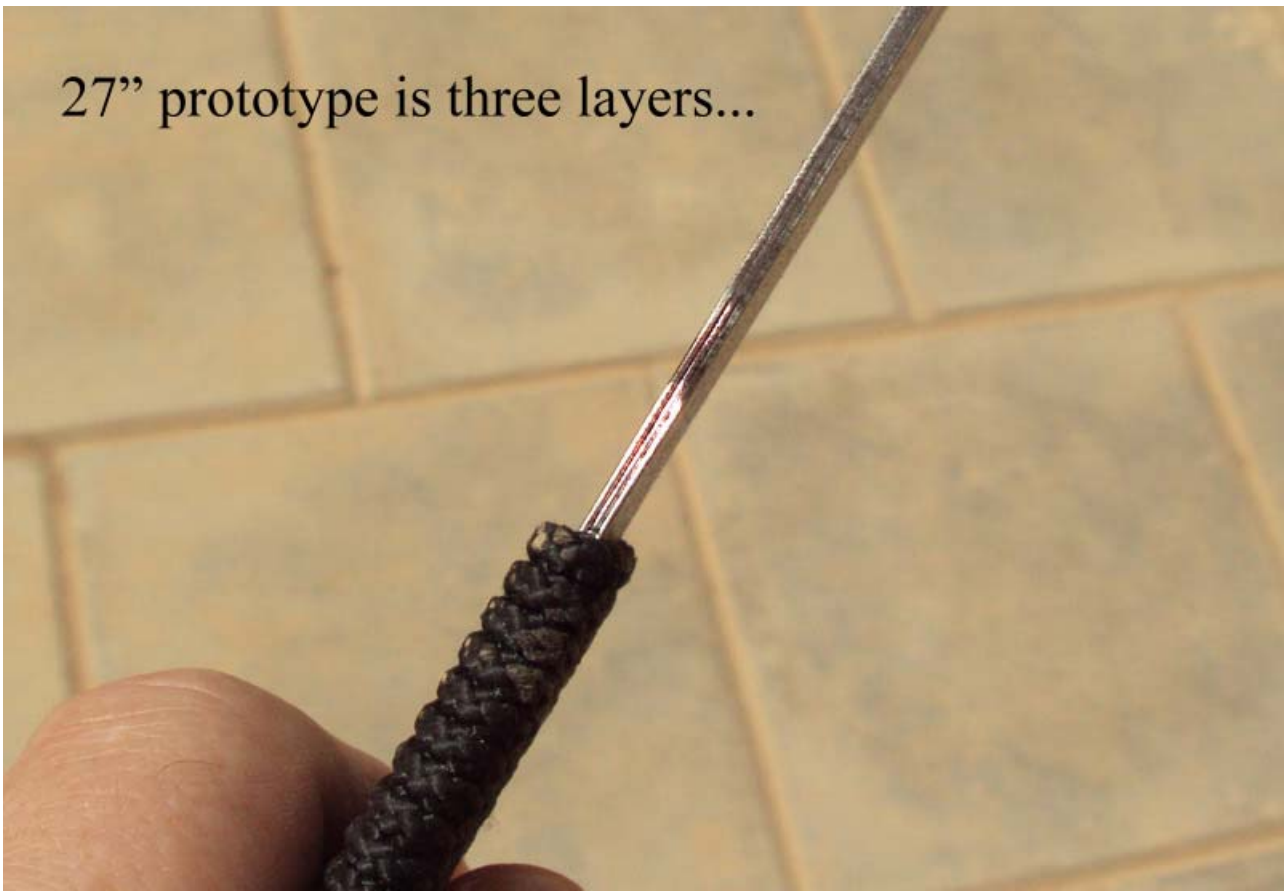
The first family is the original mono design, which means the blade is not laminated with different layers. This essentially is just a strip of flexible steel with an edge laid on it. The mono blade has been made in a few different thicknesses; however, I only tested one in this review:

31.0” – Mono – 1.5” wide x .042” thick - Sharpened

Now, the second family of Belt Sword is the laminated design. 2-3 thinner steel blades are layered together to form one RazorSword; this gives more weight and striking power to the design. The layers are stuck together via molecular adhesion (or friction) using a synthetic grease. This grease not only seals the layers together, but allows them to flex, slide, and float over one another; so that the more substantial heavier-blade may be worn comfortably in the containment system. I tested 3 laminated models in this review:

32.0” – Double Laminate – 1.5” wide x .082” thick – Sharpened
33.0” – Double Laminate – 1.5” wide x .084” thick - Unsharpened
27.0” – Triple Laminate -1.5” wide x .075” thick – Sharpened

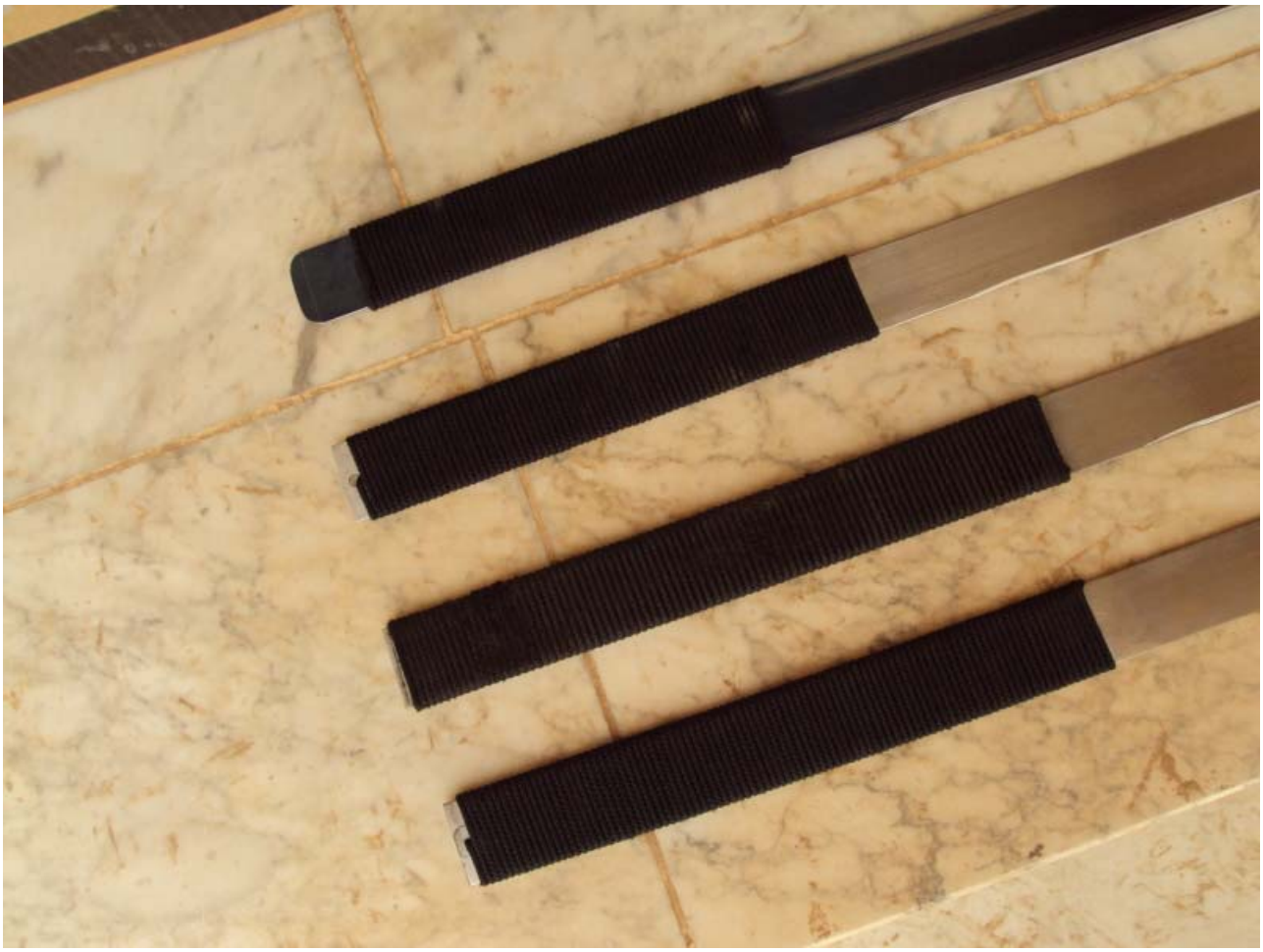

32” and 33” are two layers...


27” prototype is three layers...

The overall blade form resembles a medieval cleaver falchion or a broken-back seax – depending on how you look at the blade.

The Handles

The handles are essentially the same on the all the models. A small diameter black nylon cord is wrapped around the handle area of the Belt Sword. The amount of wrapping renders the grip length (from 8” to 12.5” on the models I reviewed), though this could be lengthened or shortened to personal preference. All of the belt swords have what I would consider to be a hand and a half grip. I’d not use two hands on the Belt Sword however. The lightweight blade would be overpowered by both hands, so I simply look at the longer grip as more surface area to adjust my grip differently on the blade.



The Scabbard

The Belt Sword does not come with a typically scabbard or sheath. Instead, it comes with a containment system. A series of metal containment clips are attached to a leather belt via Chicago screws. All of these items are of excellent quality and finish, granted the belt is austere in appearance without tooling or decor. Of course, I like my belts this way, so for me it is not a problem. One thing of note is that given a leather punch and some time, you could attach the containment clips to any 1.5” – 2.0” belt however.

You do have to attach the containment clips to the included belt however. This is because you may use a different number of clips dependant on your individual waist size, so it cannot be pre-assembled. It took me around 10 minutes to put them onto the belt and I had no difficulty with the task. Everything you need is supplied.

The belt sword then slides into the belt though these clips where it is held securely in place. You then put the belt on your waist. If your belt loops are narrow, then you cannot put the Belt Sword through your pant loops. My duty pants are 5.11 tactical cargo pants. The Belt Sword will not weave through my loops. You would have to wear it over your existing belt on the outside of the loops and secure the Belt Sword to your own belt using police-style belt keepers or work out another method of attaching the inner and out belt so it did not slip or slide. If you do have pants with wider belt loops, the system will work as a regular pants belt. Additionally, you can have your pants altered by a tailor to open the loops further to allow for the RazorSword to be worn normally.

Drawing the belt sword is incredibly easy, just pull up on the belt buckle, the handle pops out, grip the handle, and pull the sword free. The only inconvenience I can find with this system is that it's impossible to replace the sword into the belt without taking the belt off and re-sheathing the sword. This process of re-sheathing takes about a minute or so to complete, so it's not that bad of an ordeal. Just don't expect to be able to do this rapidly.

One thing of note is the response you get out of someone when you draw the belt sword. If they are not expecting it, it really freaks people out. There were cases in which I wore the belt sword around and would draw it 3-4 times before someone could figure out it was even coming from inside my belt. When you draw the Belt Sword, it gets about the same reaction as racking a 12ga shotgun – because people suddenly see you go from having nothing to having nearly 3ft of steel in your hand. I can only imagine the look on someone's face if you were to pull this out in a situation where you intended to use it. I will definitely grant the fact from testing it here that it does have a huge intimidation factor. Just based on this fact, half the people in my unit want to buy one for themselves.

There are numerous videos of the Belt Sword being drawn on YouTube, so I won't bore you with doing one myself. Their model is way prettier that I am.

Handling Characteristics

Once drawn, the Belt Swords all have uniquely different feels. These would be to the liking of different users, as not everyone would like one model. I will offer my opinions on each that I tested.

The 27.0” multiple-laminate Belt Sword felt a little odd to me. It had a good heft to it, but the three layers seemed to cause a little too much flex in the blade for my liking. The blade was slow to recover and tended to drift during the swing, frequently twisting to the point to where it would flub a tentative cut.

The 32” and 33” dual-laminate blades are definitely substantial in the hand, with a better and more solid feel that the 27” three-layer model. These blades feel pretty good in the hand, swing with authority, tend to track well without too much wobble, and have a good bit of blade presence.

The 31” mono blade is definitely the lightweight of the bunch. It’s notably thinner in the hand and without as much blade presence as the larger laminated blade forms. However, I find the feel of it good despite this.

Test Cutting

Ok, here are the meat and potatoes. We know what the Belt Sword is advertised for, but what can it do? I tested all the models to find out.

The first thing I had to do was law a serviceable edge on the blades. While some were sharpened somewhat, I wanted a consistent edge across the board for comparison. So, I set to work with a ceramic sharpener and elbow grease. I attended to this in my spare time over a couple days in order to get similar quality edges on all of the RazorSwords.

Then, I picked a nice sunny day to set about some cutting and destructive testing. On the day of the

testing, it was 116 degrees with a nice hot, dusty wind blowing. This is pretty typical for a Middle Eastern spring day.

My limited targets were…

Water bottles
A log
A 2x4
A .mil oil rag disposal can.
Concrete

I am working on a .mil base, so there are not a lot of materials to choose from. However, I feel that these materials give a good rounded assessment of the ability of the Belt Sword system.

There are a few different facets to my testing. Because I was reviewing 4 separate blades, I will break it down as best I can.

Notes on the laminated blades:

The heavier weight of the laminated blades lends itself well to Kali and Escrima type fighting. The sword itself does not have to be sharpened to cause injury, the weight is significant enough to break bones, cause contusions, or inflict major trauma without an edge on them.

With an edge applied - the laminated blades seemed to cut decently when cutting water bottles and chopped decently on other targets without edge damage. Time and time again, the cutting was quick, accurate, and clean.

Hitting a 2x4 along the grain resulted in nearly splitting the plank in two. No complaints there:

Penetration in the thrust appeared fair, with no tip damage – granted the swords did not have quite enough spinal strength to get though my metal target without flexing to relieve the pressure. The needle-like tip of the RazorSword would without a doubt penetrate a clothed, flesh target without a problem – hence the acute point.

Now, for some destructive testing! In these tests, I was trying to see what kind of damage the blades would take before the RazorSword failed. While I would not call it a failure, one thing of note was that when impacting unrealistically hard targets such as wood, metal, or stone, the grease between the laminate layers seemed to break loose causing the layers to separate as indicated in the below photos:

Of course, these were not your standard sword targets in regular conditions. These are damaging targets in an inhospitable environment – the steel impacting things that it was never meant to strike – such the log, stone, and metal targets. The Middle Eastern heat causes the grease between the blades to achieve a higher viscosity decreasing cohesion, the swords had already been used countless times on numerous targets, and the seal between the blades had diminished somewhat. I would like to point out that it took A LOT of abuse to get these blades to separate – not just one or two strikes. Now, in the photos, I am intentionally spreading the blades apart on the target to show how the blades are separated. When the grease breaks down causing delamination, the actual blade spread between blades is only about 1/8" or so.

Still, no real damage occurred, as the sword can be cleaned, the grease reapplied, and stuck back together and it 's good as new. In fact, all of mine were back to factory new condition within about 15 mins.

Now, interestingly enough, could be considered good tactically. If you are using your blade for cutting, then you have just double/tripled your cutting area and would be essentially throwing a Wolverine-style *snickety-snick* slash at them. I'd not want to be hit with a RazorSword that the laminate had came loose on.

Note on the mono blade:

The mono blade was an excellent little cutter despite its thin profile, flexibility, and low weight – granted you have to practice a few times to get used to the edge alignment. It did wonderfully on the water bottles, and to be honest, it was not bad on the more difficult targets. The sword sustained no edge damage. The sword sustained no tip damage when intentionally impacted on stone or metal – as it would flex before

dispersing too much energy into the target – much like a fencing foil. This attribute does not take away from the fact that the RazorSword would still penetrate a clothed fleshy target well, the acute point is viciously penetrating with minimal effort.

Here is a box I accidentally clipped while cutting a bottle:

As you can see, it left one hell of tip cut. I'd not care to be on the receiving end of it – that is for sure.

Further abuse on my targets did not damage the laminate or mono Belt Swords:

Conclusions

In short, the Belt Sword works as a weapon...

But, is it for everyone? No. It has a specialized tactical application. The Razor-Razor Belt Sword does work for its intended purpose. It's intimidating as hell, it draws fast, it will cut, it will slash, and it will thrust within reason. There is nothing about this system that I feel would not work in the purpose for which it was designed – which is to defeat an enemy when you have no other weapon available. However, that purpose is a very secular one – in that this system provides a concealable sword for the owner to use in a tactical situation.

One last thing of note: Currently, there are other Belt Swords in use over here in the combat theatre. I was not originally aware of this, but **apparently some of the special operations guys have been using the Belt Sword system for sometime**. Another service member watching my test cutting had seen the Belt Sword previously in another operating base in Afghanistan, which I found to be amusing. And here I thought I was unique!

Pros

- Unique carry / concealment system that the user can draw from quickly
- Cuts and thrusts adequately with practice
- Wickedly acute tip penetrates soft targets effortlessly.

- Works well as a force multiplier in a tactical situation.
- Built from quality materials.

Cons

- May not be for all sword collectors/enthusiasts.
- Multiple laminate blades may slightly separate when impacting overly difficult targets such as stone or metal.
- Sword takes time to re-sheath after drawing.

The Bottom Line

I would recommend this sword to someone who felt they needed a good, lightweight, concealable edged weapon system to augment their tactical gear and other weapons. Though, I would not select the Belt Sword for my primary weapon in any scenario, I would damn sure like to have it if I were in a situation and the bullets ran out. Just drawing it is intimidating as Hell, and knowing that it will perform its duties as advertised – I'd be comfortable with the Belt Sword in my modern-day warrior's gear.

Odingaard out...