



Press Release

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Phalanx Defense Systems, LLC announces the completion of a fully functional real world ironman suit.

Gainesville, FL—Phalanx Defense Systems, LLC, a leader in the design, development and manufacturing of body armor and protective systems announces its completion of a fully functional ironman suit, which they refer to as the Rhino Adaptable Armor System (RHINO).

"The RHINO is an articulated armor survivability system that provides the wearer reduced trauma associated to impacts from various handgun, shotgun and rifle threats." Phalanx CEO/Applied Sciences James Coats offered. "Being articulated and also by incorporating Phalanx's ultra-lightweight ballistic technology, the armor is able to be positioned to provide protection over more critical areas of the body."

Phalanx Defense Systems acquisition of DKX Armor in December of 2015 enabled Phalanx ballistics engineers to explore new ground as relates to armor operability and material science advances. "Using new and existing materials in new combinations provide design capabilities previously unattainable, allowing for innovations in armor systems that function like no previously available armor." Says Coats.

We are scaling up production capabilities to start produce RHINO components as we hope to have several more units in testing before the end of the year. Says Coats.

When asked about some of the comic book characteristic of Ironman, such as, flight and repulser beams Coats replied, "not yet but that doesn't mean it's not possible. The Rhino has many capabilities that we haven't mentioned due to ongoing development, testing and evaluation."

Recent press coverage can be found at <http://m.gainesville.com/Section/545/Article/150929811>

About Phalanx Defense Systems, LLC

Phalanx Defense Systems thrives on identifying and creating technologies that push the limits of engineering. Establishing new standards of performance and excellence within the personal protective and armor industry is done with its team of ballistics engineers, current and former military, and advanced design engineers. Phalanx Defense Systems brings products to market that are unique, creative and most importantly exceed customers' expectations. They address advanced threats and conditions using innovative design and material science, always focusing on gear that protects our protectors BETTER than anything else on the market.

Everything but the jet pack included in this high-tech law enforcement gear

By Anthony Clark Business editor, Thursday, September 24, 2015 10:36 PM

A life-sized replica TIE fighter — Darth Vader's ride — sits in the parking lot at Phalanx Defense Systems, next to a Batmobile-inspired armored vehicle.

The front foyer includes a life-sized Iron Man, R2D2, C3PO and a Cylon from Battlestar Galactica. Costumes and statues of Vader, Batman, Spiderman, Boba Fett, Captain America and Predator occupy the offices, conference room and production area.

CEO James Coats said the figures help employee morale and make for a fun work environment, but also inspire the serious work they do.

Phalanx makes body armor, shields, holsters, utility belts for law enforcement and other firearms accessories with 23 employees working in the former Federal Aviation Administration station at Gainesville Regional Airport.

The company's latest offering is the Rhino Survivability Suit, Phalanx's own version of Iron Man. The Rhino is a head-to-toe suit made of Cordura ballistic-resistant military grade fabric with pockets for body armor — 14 in all — that cover 75 percent of the body's vital areas, connected by spandex to allow freedom of movement. An air conditioner that weighs less than 2 pounds with 12 hours of battery life connects to the back to blow 71-degree air down the spine.

A ballistic helmet is equipped with subsonic-hearing headphones that amplify sound coming from all directions and shuts down during gunfire to protect the user's hearing. Goggles can be see-through or work with a tiny camera that can see in the dark.

A stunt suit from Batman Begins on display near the production floor was the inspiration for how to articulate the different pieces to tie together armored plates. Form-fitting shoulder pads on a Captain America suit showed how to cover more body area than the gaps bullets could find on Batman's suit. The configuration around the arm came from Star Wars Stormtroopers.

Coats grew up watching Star Wars, Battlestar Galactica and 1980s costumed super-cop movies Megaforce and Street Hawk.

He said the movie industry has done a good job of creating durable costumes that allow a stuntman to comfortably do his job and be able to function as needed over a long day of shooting.

“In our industry it makes a difference between life and death. If this guy is not quick enough, he's going to endanger himself or his team,” he said.

Phalanx's body armor — made from stacked and pressed polyethylene sheets that can stop a rifle bullet — has one-third the weight of metal ceramic armor, allowing the suit to cover more body area without weighing down the user. A fully loaded suit weighs less than 50 pounds.

The company worked with the University of Florida Biomechanics Laboratory to distribute the weight to lessen fatigue and reduce injuries to the back, neck and legs.

A metal micro-mesh embedded in the suit includes a circuit that, when broken by a bullet, activates a GPS system that dials for help. The mesh is also resistant to tasers. Carbon nanotubes and other materials makes the suit invisible to thermal infrared sensors.

Phalanx's building includes a ballistics lab where they test the equipment.

“We will literally shoot the hell out of the system and find the holes and then fill the gaps and put it



back on, do it again and again and again and again," Coats said.

Phalanx released the Rhino commercially in the last two months and has sold several. Coats does not say who his customers are, although the company serves military and law enforcement agencies.

They will take the suit to the International Association of Chiefs of Police convention in Chicago next month.

Coats said the suit is more of a military special ops kit, but trends of civil unrest around the country targeting law enforcement have opened up that market.

"Ultimately we're finding that these sorts of technologies are finding their home in the United States for various applications," he said.

A stripped-down version would cost \$17,000 to \$19,000, while a fully loaded version could go for \$60,000 to \$80,000.

A high-end version includes a material that can change color electronically by changing the temperature using thermochromic dye — think mood rings.

The company is working on a suit to protect users from chemical warfare, with designs borrowed from the SCUBA industry and a spandex lining that drops from the helmet to create a collar and completely contain the environment in the suit. Coats said the challenge is figuring out where to put a filter so it doesn't take a bullet.

"It doesn't fly. That's the only thing," Coats said. "I've got engineers that want to make a jet pack."

