

Israeli Technology: Rope Access Using Drones

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Rescue missions and law enforcement operations often require working at heights, and coping with unique rope access challenges. Rescuing survivors from buildings in the aftermath of an earthquake or from the flames of a burning building are some of the complex tasks of responder teams. The Israeli startup **Highnovate** offers unique and innovative solutions to these challenges.

The company was founded in 2017 following the focused search for products that were not available in the market at the time. Idan Peretz, the CEO, has years of experience in rope access in the military and civilian realms, expertized in climbing and rescuing and retired from IDF services some two years ago; and Be'eri Katznelson, the CTO, with years of experience in technological developments, including few patents of the company. The two joined forces with Eyal Mastboim the owner of an industrial company for engineering products, including metalworking. The three partners are all veterans of the IDF special operations units with 25 years of experience in the field.

The company has recently presented its advanced solutions in the **iHLS Startup Competition for Security, Defense and HLS**.

Tipula - Drone Anchor Placement



Highnovate's patent-based products offer solutions in two types of markets: the tactical market – police and law enforcement, military, special forces, etc; and the HLS market – search and rescue, firefighters, first responders, as well as working at heights.

Special forces, firefighting departments and search and rescue agencies are the company's major customer in Israel and abroad, and it has many distributors in dozens of countries.



Photo Inbal Katzenelson

Highnovate's solutions are intended for cases where there is a need in quick contact, carrying heavy equipment during climbing, etc. They supply a rapid and effective functioning under pressure, when weight and volume have to be minimal. The unique advantage of the products is the great emphasis on the user's ergonomics.

One of their leading products is the RAFA, a portable fast anchor. It is a very light product that can be put on a window or door within 10 seconds from opening, enabling rappelling or taking a person down the rope. It is suitable for special units, rescuing wounded, access through windows, etc.

Firefighters can use it for quick climbing and rescuing without having to carry heavy loads. RAFA comes in two versions, for civilian and tactical uses.

Recently, the company has widened the scope of its activity to the drone field. Idan Peretz, CEO, said: "Drones have been used for intelligence, forces command and control, rescue mission etc. for a long time, but in spite of the meteoric advancement in this field, we realized that in fact, no one was using drones for transferring ropes from one point to another. Current solutions were not effective enough. We identified the need in drones as means for rope access."



The company has become a world pioneer in the use of drones for rope access. It develops and manufactures products that connect to drones – for the purposes of attaching anchors to a building, anchoring ropes from both sides of a river, and more.

Photo IFT Iftah Shavit

TIPULA is one of Highnovate's new products. It is a technology for transferring an anchor through a drone and attaching it to a concrete or metal beam on the roof. The drone enables the forces to enter a building from the outside and quickly operate the rescue inside the building. It is designed for rope access to high buildings in cases where ladders are not available.

“In the future, we plan to further develop new products in the drone realm,” Peretz added. “We strive to lead the rope access through drones market. In addition, next year we will intensify our operations in the field of rescue solutions from buildings.”

The current rescue solutions in the market are often part of the building infrastructure, and require heavy investments without being too effective. The company offers a professional and effective solution: personal gear supplied to the teams. Highnovate supplies the anchor to a system, developed in cooperation with the Israeli company Skysaver, which manufactures a backpack with a mechanism that can rapidly take down a person from the high floor of a building on emergency – an office building, hotel, hospital, etc. Thanks to the technology, firefighters or security teams can help the survivors descend through a bypassing way.

As safety is critical, the manufacturing of Highnovate's products is at the highest engineering level. The company's developments are manufactured in the US by Rock Exotica, one of the world leaders in the field. Some of the accessories are manufactured in Israel. The R&D center is located at the Caesarea Industrial Park.

Instruction is an integral part of the product. The company offers a complete solution to special operations units, including instruction through collaborations with instruction centers in Israel and globally, e.g. the Israeli Rescue1 school for rescuing and working at heights professions. In the US, the company works in collaboration with the school which instructs all the police and military organizations in this field. Highnovate also cooperates with other companies in the fields of drones, courses, authorization, etc.

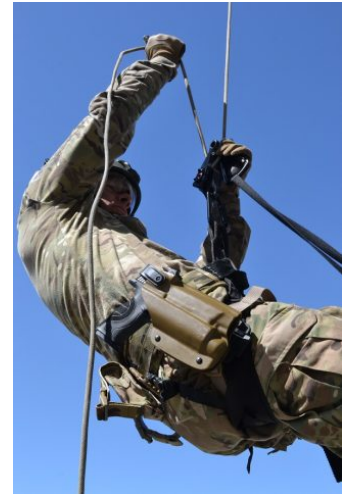




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