

## BEFORE TOMORROW'S START OF THE FIS ALPINE WORLD CHAMPIONSHIPS

# FIRST REAL-LIFE DEPLOYMENT OF THE D-AIR BY A FIS ATHLETE

- The D-Air is the first airbag for skiers, designed by Dainese in collaboration with the International Ski Federation (FIS).
- Jan Farrell, current FIS World Cup Speed Ski SDH winner is the first skier to explode the airbag in real life conditions.

**La Pinilla, a small ski resort just 1h north of Madrid, 2nd of February.** There could be no one better than one of the fastest men on skis in the world, Jan Farrell, to FUDVK test the DLUEDJ IRU VNLHUV D-Air® Ski. The device is the result of a co-operation between Dainese, market leader for protection in sports, and the International Ski Federation (FIS) to improve safety of alpine ski racers, specifically in speed disciplines. This test is one step forward before the Beaver Creek ),6 Alpine World Championships, 86\$ which start tomorrow.

At D VSHHG RI kph, substantially less than one of Jan's standard runs, the crash occurred 7KH ' \$LU® activated successfully, ensuring a safe injury-free fall and demonstrating the performance of the system. Jan stated: "Before the first impact against the ground, the D-air deployed. I heard a boom and instantly felt how the airbag inflated, it was like being inside a shell. I felt safe and protected during the fall: after the initial tumbling and sliding for about 70m, I came to a stop, unbruised."

This is the first time Dainese has performed a simulation in real life conditions with a production unit, aside internal initial testing. Vittorio Cafaggi, Director of Strategic Development was present during the testing in the Spanish La Pinilla resort, stated: "today's test was very important in case any athlete still had any doubts. Thanks to Jan, we've tested that the system works and that it doesn't interfere in the natural movements and performance of the skiers."

This simulation also demonstrates the versatility of the product, being valid for other disciplines such as Speed Skiing, as Jan stated: "My initial preoccupation regarding chest compression (it inflates with a high pressure inside the suit) was unfounded, so now I'm planning to use it always during ski training. Next time we're testing in the Wind Tunnel I'll measure its interaction with my aerodynamics at 200km/h, but in principle it looks promising: I think it could be possible to use it during high-speed races and record attempts. Certainly for my future Sand-Dune Guinness World Record attempt it's going to be great to be able to use it."

## The crash algorithm

D-air® Ski is able to absorb 61% of the force generated by impact and is fully integrated into an elastic vest that fits under the race suit and above the back protector. The algorithm now implemented in the D-air® Ski system is the result of a thorough analysis of data from the runs of the World Cup over two seasons, involving 4 federations, 26 athletes, 238 runs and 700 minutes of data. It was written to meet the specific requirements of Alpine skiing, it activates each time the athlete's body performs rotations that are anomalous compared to normal racing dynamics and the signals coming from 7 sensors exceeds a predetermined threshold.

The two building blocks of the D-air® Ski are the electronic and the pneumatic components. The electronics are housed in a pack on the back and include an inertial platform with 3 accelerometers, 3 gyroscopes, a GPS, a microprocessor for algorithm management and memory. Signals from these sensors are constantly analysed by the algorithm, and inflation is triggered if the conditions require it; The pneumatics consist of a bag with an internal 3D structure, inflatable to high pressure, and a "cold" gas generator.

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## About Dainese

The history of Dainese began in Molvena, Italy in 1972. Lino Dainese, a young motorcyclist and businessman, started designing and making protective clothing for bike riders. Taking inspiration from the geometry of medieval armoury and from nature itself, Dainese made technological innovation for protection during sports their true mission. To Dainese safety means protection, comfort and reliability, factors which, when properly balanced, lead to the creation of highly effective products which meet the requirements of a wide range of customer needs. Riders on track need a different balance between protection and comfort than, for instance, scooter riders. The engineers at D-Tec (Dainese Technology Center) have all the skills needed to transfer the experience gained from the extreme conditions of competitions, to create a collection of products that caters for all types of motorbike riders. Research, development and competition are therefore the essence of a journey that began more than forty years ago. From Giacomo Agostini to Valentino Rossi, Dainese became part of motorcycling with the greatest riders thanks to their invention of products like back protectors, knee sliders or the evolution of existing products with the introduction of innovative technologies and materials. It was Dainese who conceived the idea of "head-to-toe" protection which combines various clothing components with rider protection, and optimises performance and weight. It was also Dainese who created D-air®, the intelligent protection based on air bag technology for bike riders.

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## About Jan Farrell

Jan Farrell was born in 1983, the son of a Czech mother and an English father. Jan first put on a pair of skis when he was 2 years old, and he has never missed a season since the age of five. His first speed ski race was in 2011, and soon began to have success: he is the top ranked British ski racer; 9th in the world in 2012, and 5th in 2013, before winning the top spot in 2014, becoming FIS Speed Ski World Cup SDH Champion. He reached a speed of 210.035 kph, thus becoming the third fastest skier in history on downhill skis. Jan combines his career as a top sportsman with that of an entrepreneur. When he is not skiing, you will find him in his office at Liberalia, the company he founded at the age of 18. He is actively involved in over half a dozen firms, plays an active role in various federations, including FIS and the Madrid Ski Federation and acts as a Mentor for budding entrepreneurs who are studying their MBA at IE Business School. His passion to create, develop, compete and his will to win is just as strong in his business environment. Jan is sponsored by **Atomic, Leki, Liberalia, Manifesto, GlobalPhysio, SkiClinic and CoppelDental.**

[janfarrell.com](http://janfarrell.com)[twitter.com/janfarrell](https://twitter.com/janfarrell)[facebook.com/farrelling](https://facebook.com/farrelling)[instagram.com/j.farrell](https://instagram.com/j.farrell)[press@janfarrell.com](mailto:press@janfarrell.com)

Vittorio checking Jan's D-Air® before the test.



Thumbs up after safely sliding to a halt.



Inflated airbag after the controlled crash.

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