

CRASH TESTS

STUNT TESTS

The company has conducted crash tests with the airbag jeans at speeds of 50 km/h, 70 km/h, and 80 km/h. These tests were performed in collaboration with a stunt team that executed “laydowns” with the airbag jeans several times. A “laydown” involves the rider allowing the motorcycle to lay down on the asphalt while in motion. This is one of the most challenging situations for the airbag jeans to handle because the rider separates from the motorcycle late, and the airbag must deploy and be fully inflated before the rider hits the ground.

The results show that the airbag jeans can handle this type of accident scenario. The airbag inflates and cushions the impact forces as supposed. The airbag is intact after the laydowns while wear and tear holes have appeared in certain vulnerable areas of the jeans, with a diameter of approximately 1-2 cm. However, the sturdy motorcycle fabric has effectively kept the garment together and protected the airbag and the rider.

INFLATION TESTS

About thirty tests have been conducted on the activation system to ensure that it functions correctly and deploys in the right time before the rider hits the ground. The most crucial factor in these tests has been that the airbag clothing remains inactive while the person is in the air, then activates in the air and is fully inflated before the person hits the ground.

The results have shown that the clothing meets these requirements and functions as intended.

FALL TESTS

The company has conducted two fall tests with the airbag jeans and airbag vest at a speed of 25 km/h. The tests demonstrate that the airbag jeans effectively lift the entire body off the asphalt and creates a protective barrier between the rider and the ground.

One of the positive effects is that the lower legs are lifted at an angle that prevents the knees and legs from coming into contact with the asphalt when rolling around in an accident situation.





REAL LIFE MOTORCYCLE ACCIDENT

The airbag jeans were involved in a real accident and successfully protected the rider. The rider was traveling at a high speed, around 120 km/h when a curve suddenly appeared. Due to the extreme speed, he went off the road and ended up in a ditch. Just before the accident, he managed to reduce his speed to about 40-50 km/h and narrowly passed a lamppost with only a few centimeters to spare. There were two strong impacts, one against the side of his back and one against the side of his thighs/knees. Afterward, he rolled on the ground until his body finally came to a stop.

Despite the accident, he was able to stand up without any injuries. He felt the force of the accident, but it did not hurt, and it did not result in any injuries. The clothing automatically vented after the accident, and he was able to go home unharmed.

The jeans, airbag module, and airbag vest remained undamaged after the accident, and they were recharged with new CO2 cartridges and are still in use. Without the airbag clothing, this accident would have led to injuries to the back and knees. In the worst-case scenario, the injuries could have resulted in paralysis and the loss of the ability to use one knee. Thanks to the airbag clothing, these injuries were avoided.

CONCLUSION

In both the real accident and the tests with stunt performers, all individuals confirmed that they did not experience pain during the tests, thanks to the airbag's ability to absorb impacts. This is an impressive achievement, even considering that some tests were conducted at speeds of up to 80 km/h against the asphalt.

The airbag clothing has demonstrated its capability to handle and minimize the energy from impacts before it reaches the body. Test subjects have felt the forces from the accidents, but it has not been painful due to the airbag's ability to absorb and cushion the forces.



CE CERTIFICATION

CE

The company's products are currently undergoing EU certification for motorcycle clothing. The company's own tests demonstrate a safe product with effective protection in accident situations, and it is now being tested by independent testing institutes.

The company is undergoing the CE certification process in collaboration with hired CE experts and our airbag factory, which has extensive experience in creating CE-certified airbag garments. The CE process for the airbag jeans has begun, and the CE standard the product is being tested against is EN 17092, which is mandatory for motorcycle garments.

The certification process is a part of the company's operations, and future collections will also undergo this process, with the necessary measures taken to certify the garments.

It should be noted, however, that CE certification is only mandatory for sales within the EU.

CE MATERIAL

The company's airbag clothing utilizes CE-certified motorcycle denim, which comes in three safety classes: A, AA, and AAA, where A is the lowest and approved for motorcycle riding, and AAA is the highest.

In addition to the airbags, CE-approved knee and back protectors are also included in the products as an additional layer of protection. This combination of CE-certified denim and protective inserts enhances the safety features of the clothing for motorcycle riders.