



## CE-Standard prEN 1621-2

Draft standard for back protectors in motorcyclists' clothing

Technical Information

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The term "back protector" pertaining to motorcyclists' clothing is to enjoy special protection within the EC. To enable a differentiation to be made between effective and ineffective protectors and those that offer too little padding, minimum requirements have been set out in a draft European standard, which must be fulfilled by a "back protector".

The draft European standard (prEN) 1621-2 determines the minimum protector size and sets out the shock absorption requirements the protector must meet in order to protect the wearer from injury.

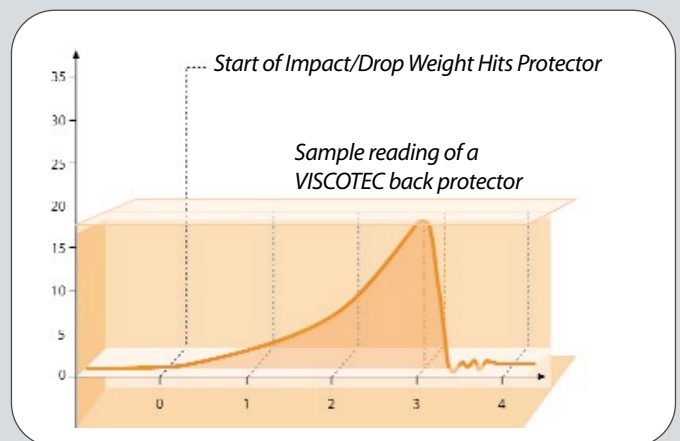


**Hemispherical striker with slightly arched anvil**

The ability of the protector to absorb mechanical energy is determined by means of an impact test. A striker weighing 5 kg with an impact edge in the form of a kerb is dropped on the protector from a height of 1m. The protector is positioned on a slightly arched anvil, equipped with a device for measuring the force. This device measures how much force is still present underneath the protector. This is the residual force that would impact on the body of the wearer and which ultimately causes injuries. The lower the value, the more effective is the protector.

After several impacts, the residual force value must not be greater than 24 kN and the average of all impacts must be below 18 kN. These impacts (steel drop weight on steel anvil, that is, no protector and no delay time) generates a peak force of approx. 150 - 180 kN.

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**Force-Time Diagram**

In a second more stringent quality category, this requirement specifies 12 kN for the maximum value and 8 kN for the average value.

According to the EN standard, each protector must be supplied with instructions on its prescribed use, positioning, cleaning and care, as well as basic technical data. These instructions must also indicate what the wearer must do with the protector after a crash or fall.

The size of the area on the back to be protected depends on the body size of each individual wearer. The length and width of the back protector is measured as a percentage of the length of the thorax (distance between the neck/shoulder and the the waist). The height is (1) 72,5 % and the width (2) 44 % + (3) 29,4 % of the length of the thorax.

