

## **Development of an Helicopter-Borne Gas Device for Avalanche Preventive Release**

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This new device called DaisyBell® combines the helicopter mobility with the advantages of a gaz system. It is an interesting alternative to the helicopter bombing with explosive to control slide paths that are not equipped with permanent remote preventive release systems. Helicopter-borne over the zone to be cleaned, DaisyBell® consists of a cone-shaped device made of steel with high mechanical properties which contains the gaz mixture for the ignition and directs the explosion blast towards the snow cover. This mixture of less than half a cubic meter is injected at the top of the cone during stationary flight for a duration of 7s with stoichiometric proportions and then, is ignited by two plugs. The system is entirely autonomous in gaz and in energy with a capacity of about sixty shots before changing the bottles. DaisyBell® is remotely controlled by radio and all operations are controlled from the helicopter cockpit. The remote control indicates at all times, the level of gaz reserves and displays the distance between the device and the snow mantel. The shock wave produces an overpressure of 25 mbar in a 25-meter radius, above the snow cover similar in efficiency to a 0.8 m<sup>3</sup> Gazex® exploder.