



AUDI FIS SKI WORLD CUP

DOLOMITI SUPER TROPHY
MEN'S GIANT SLALOM
21 DECEMBER 2014



Foto 1



Foto 2

BARRING THE SKI SLOPE

For an international-scale competition like the Giant Slalom on the Gran Risa in Alta Badia it is essential to prepare a ski slope that can resist the marked effect of skis on snow so that even the last athlete can hopefully find the same features as the first one on the same slope and will be able to win or at least qualify amongst the first 30 and compete in the second run. This is why we use BARRING.

What is it? Snow is a mixture of air and water and barring is an injection of water into the snow in order to increase its content and increase the specific weight of the snow itself. Natural snow normally has a specific weight of around 250 kg per m³, (soft snow), i.e. 250 litres of water for each cubic metre of snow, to 400 kg per m³ (wet snow). For a competition, snow needs to have a specific weight of around 550 kg per m³. In comparison, ice has a specific weight of just under 1000 kg per m³. It is also essential that the whole covering of snow, which must be at least 40 cm high to hold the poles, has the same specific weight, and therefore it cannot be dampened with a hydrant as in the past, because that would only create a

thin, very hard layer of snow like ice, which could crack under the blades and form so – called 'tanks'. In order to obtain this, water is injected using a 2 inch steel tube that is around 5 m long, lying on the snow on the side where the jets are positioned. These inject water at a sufficient pressure to reach the depths of the snowy covering. Snow normally has a temperature of around -6 to -10 °C; therefore water, which is warmer, evaporates from the bottom and spreads to form a cone shape as it rises, thus dampening all the snow. The jets are positioned around 10 cm from each other and the tube – positioned transversally in relation to the slope – is moved vertically by hand and left for a few seconds to allow the correct quantity of water to penetrate. This results in around one injection for every square decimetre of slope (see photo 1).

In practice, to achieve the correct specific weight of snow on the Gran Risa slope around 4,000,000 holes have to be made and a quantity of around 700,000 litres of water injected. To reduce working time, several tubes are connected to cover a useful width of the competition slope (see photo 2)