



***Ukrainian Carpathian mountains:  
Reliable snow cover guaranteed with TRM technology***

***Bukovel – the largest single snowmaking project in the world***

A top-notch ski resort is being built in the Carpathian mountains of the western Ukraine, in an area of extensive woodland and thermal zones which, until five years ago, was completely undeveloped – Bukovel. Around 100 hectares of woodland (approximately the area of some 200 football pitches) has been cleared to make the huge project a reality. Ski slopes, lifts, holiday accommodation and not least the entire infrastructure has sprung up practically overnight.

The entire snowmaking system for Bukovel has been delivered and installed ready for operation by the general contractor, VITA GmbH based in Eppan in the South Tyrol, with the exception of the snowmakers and the software. This gave TRM the opportunity in 2005 for the first time to supply the pipes and fittings for a 17 kilometre long pressure pipeline for this project. Another 34 kilometres were supplied the next year. Another contract for implementing part of the drinking water supply (four kilometres of supply pipe



from the mountains) followed. The work was completed in 2007. In the same year VITA built a small reservoir to guarantee that the snowmaking system would be supplied with enough water. “Bukovel II” has a capacity of 98,000 cubic metres and its dimensions

(240 metres long and 82 metres wide) make it a small lake rather than a pond. In view of the excellent progress of the work and the customer satisfaction, a three-year contract was clinched for the turnkey implementation of the entire snowmaking system of over 100 kilometres, along with the related infrastructure.

**Snowmaking in grand style**

51 kilometres of snowmaking has now been installed and commissioned. With effect from 1 November, the start of the season in Bukovel, 60 fan guns and 320 tower guns will make artificial snow on 51 kilometres of pistes. The plans for 2009 envisage that a total of 110 kilometres of snowmaking pipes will make the coveted snow on 110 kilometres of pistes, doubling the capacity within two years. On completion, the area should have around 300 kilometres of pistes. By way of comparison: one of the largest ski resorts of the central Alps, Ischgl, has 215 kilometres of pistes.



This means that Bukovel will be assured of reliable snow cover by the world's largest linked and fully automatic snowmaking system.

The total power consumption of the system as currently installed is approx. 7500 kilowatts; this capacity works out to a maximum snow output of 3900 cubic metres of snow per hour, which is rather more than one cubic metre of snow per second!

It was possible to meet the short construction time for the snowmaking system and drinking water supply on schedule because pressure pipes with VRS-T® socket joints were used, which are extremely quick and easy to lay.

Bukovel will certainly not be the last project of this type in Eastern and South Eastern Europe. The snow systems competence centre is currently working on several systems in South Eastern Europe and the Middle East.



### **Bukovel – Ukrainian ski resort on the up**

In the days of the Soviet Union, the Ukraine was “a long way a way” from our Western European perspective and was really only known as the granary of the east and for its weather-beaten wooden houses and horse-drawn carts. Since it opened up politically, the state of 50 million people has developed quickly. The development of the Bukovel ski resort in the Carpathian mountains clearly shows how ambitiously work is being carried out to reach European standards. Snow sports as a leisure activity are an indicator of the development of the middle classes.

Bukovel is already the most prominent ski resort in the Ukraine. It is situated 30 kilometres from the idyllic little town of Yaremche in the Ivano-Frankivsk province and currently has 14 lifts and around 50 kilometres of pistes. The construction of infrastructure is intended to turn the most modern ski resort in the Ukraine into a world class resort in the future. The stunning landscape,

the historic flair and the cultural traditions of the locals will all help the plans. The Ukrainian government has granted Bukovel around 260 hectares of land for the expansion of the resort in order to support the construction of pistes and service facilities so that a bid for the 2018 Winter Olympics will be possible.

Huge investment is planned through to 2010 to extend the pistes to nearly 300 kilometres and to build approx. 35 lifts, making Bukovel one of the 20 largest ski resorts in the world.

As in the rest of the Carpathian mountains, the season runs from December to the middle of April. There is no such thing as totally reliable snow cover. The disastrous 2006/2007 season, during which Bukovel could not open until the end of January due to an extreme lack of snow, showed that climatic conditions can upset the best-laid plans. So artificial snow was a must so that Bukovel can offer its visitors what nature is no longer able to: reliable snow cover!

