



- The larger tank volume, combined with lower fuel consumption, yields a greater range – and thus sufficient reserve to make you feel safe even during long shifts!
- Electronic assistance systems such as AutoTracer and AutoWinch make work more efficient and deliver ideal slope quality at the same time.

### **Run smart**

Advanced slope grooming demands maximum concentration at work, even at night, in poor visibility or on steep slopes. The PistenBully 400, which is as easy to steer as it is convenient, is the right tool for this task.

• Uniform operating concept (as in Pisten-Bully 600 and 100) with intuitive, ergonoFlexibility is a benefit of the new ProBlade. Integrated hydraulic transport tines are the ideal solution for moving park equipment around. The sharp side cutters shape kickers with ideal cutting edges. The one-touch-straight function sets the blade straight by pressing a button. Still, the wings can be tilted backwards for better snow transport.

mic double-joint joystick for four simultaneous movements of the blade. Control elements are arranged in the same way across all models for easy orientation if you switch vehicles.

- Four memory slots for four individual operator settings.
- Uncluttered and intuitive iTerminal with touchscreen.
- Comfort cab with more room to move, an optimized cab climate, improved acoustic and thermal insulation, low-maintenance interior lining and two beverage holders and storage compartments each.

#### Run clean

Environmentally friendly fleet: Equipped with a clean 6-cylinder engine with 435 metric HP including a diesel particulate filter, the PistenBully 400 also meets EU Stage V / EPA Tier 4 final. Thus it has the most powerful engine in its class.

- Clean, maintenance-friendly engine that reduces downtimes.
- HVO ready: Approximately 90% less CO<sub>2</sub> emission thanks to fuel from plant and animal waste

- SNOWsat LiDAR ready: Snow depth measurement up to 50 meters ahead of and to the side of the vehicle (2,600 m<sup>2</sup>).
- Organic hydraulic oil: Increases in the service life by about 25% due to better lubricating characteristics.

## Typical of Kässbohrer

Like all the other models, the four new ones (PistenBully 400, 400 W, ParkPro and now also ParkPro W) embody the entire experience and enthusiasm of the PistenBully engineers – developed and tested in the usual close collaboration with customers. The supporting offers from Kässbohrer further enhance the value of PistenBully: the dense service network, the reliable and quick spare parts supply, the extraordinary proximity to the customer, advanced quality assurance, SNOWsat and the PRO ACADEMY. In short: a sustainable corporate culture that supports customers on their journey to a smaller CO<sub>2</sub> footprint.



More on this

https://www.pistenbully.com/runred

From a beer mat idea to marginal temperature miracle:

# "There is still room for a third head"

Their appearance is still unique in the snow-making industry: Launched successfully on the market exactly 5 years ago, the Bächler SnoTek TRIDUSA with its three snow heads still looks very impressive on the slopes of this world. What started out as a 'beer mat idea' now delivers a snow output in a marginal temperature range that never fails to impress.



Klaus Weisl, responsible for the Austria-East sales area at Bächler and initiator of the triple-head snow lance.



appy Birthday SnoTek TRIDUSA! The triple-head snow lance from the Swiss lance specialist Bächler is already celebrating its 5th anniversary. According to the manufacturer, the 100% in-house development convinces through a large area coverage and up to 21 m3 of snow per hour at a start temperature of -1.5°C wet-bulb temperature (WBT). The 2-step lance achieves maximum performance from approx. -6°C WBT with up to 67 m3/h or a water throughput of 8.5 litres per second respectively. But how do you come up with such a crazy construction?

## The beer mat idea

At Bächler, an intensive exchange of information is maintained between the development department and the sales teams in the ski resorts. Every January, company personnel meet whenever possible directly in a ski area where new Bächler hardware has just gone into operation. The latest successes but also new challenges find a direct line to the development department and strategic corporate planning. And then there are always the cosy evening hours after a day's work...

At that point in time – around six years ago – Bächler had already had several years of experience with double-head snow lances. Based on the company's own NESSy technology and the additional performance levels of the SnoTek lance family, an excellent performance was achieved in the marginal temperature range. In the upper performance range at lower temperatures, the Bächler lances also offered comparable throw widths and snow quantities to low-pressure snow guns while simultaneously requiring 5 to 7 times less power requirements.

However, Klaus Weisl – who is responsible for the Austria-East sales region at Bächler – saw additional potential especially in the marginal temperature range. After the successes with the double-head NESSy and SnoTek MEDUSA versions, he realised during the evening brainstorming session: "There is still room for a third head!" With great amusement, the group took on board the idea of the three snow heads. A little later in the evening, Klaus Weisl reiterated to Bruno Koch – CTO at Bächler and responsible for construction and new developments: "The idea was meant to be taken seriously."

### More is more

Bächler would not be living up to its ambitions as a "pioneer in snow technology" if such ideas were not given space for further consideration. In any case, the development team in Emmenbrücke near Lucerne immediately began work on the SnoTek TRIDUSA, the first lance with three snowmaking heads. The main challenges in development were the weight of the threepiece combination at the end of a long lance tube and the snow cover that could be achieved. The latter in particular had to ensure that the three snow heads did not hinder each other during the individual phases of the snow making process. Thereby, the development team once again benefited from the modular design of the Bächler snow lances: The SnoTek TRIDUSA is also based on NESSy technology with an additional SnoTek snow steps which is also used in the SnoTek TRACK. The basic modular system at Bächler guarantees a high degree of variability, also regarding special challenges, while simultaneously ensuring that the components used are highly reliable

The results of the almost six-month development work allowed Klaus Weisl to confirm that his initial idea was no pipe dream: according to Bächler, the SnoTek TRIDUSA not only delivers up to three times the amount of snow on paper and thereby covers a large area, it also works when it comes to marginal temperature behaviour. The same applies to the economic and technical advantages of the energy-efficient Bächler snowgun technology when it concerns, for example, integration into existing snow systems. According to the manufacturer, the SnoTek TRIDUSA is becoming increasingly more popular worldwide and, with over 500 units installed and with a strongly upward trend, is now a real "bestseller" in the Bächler range which currently has a total of 8 models for outdoor and indoor applications.

## Does more result in perhaps even more?

Would having more heads make sense? "Never say never!" is the motto at Bächler – but, at the same time, there are legitimate doubts about further upgrading. The intended high level of energy efficiency and optimum snow quality require a smooth snow making process. If this challenge is not to be underestimated using three snow heads, the complexity increases exponen-





The triple-head technology guarantees a large area coverage. | The lance provides up to 21 m3 of snow per hour at a marginal temperature of -1.5°C FKT. | Tried and tested for 5 years now and known as the "marginal temperature miracle".

tially with additional heads. At the moment, the amount of snow currently being produced also argues against adding more snow-making heads, the additional output of which could hardly be moved more efficiently by snow groomers.

As is often the case, what is technically feasible must be measured by considering the expected result. But as the example of the Bächler SnoTek TRIDUSA shows, even unusual ideas generate completely new results that ultimately make the difference.

