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For Immediate Release

HEAVENLY VALLEY COMBINES HIGH-VOLUME SNOWMAKING WITH COMPUTERIZED AUTOMATION FOR MAXIMUM EFFICIENCY

[Midland, MI] -- One of the nation's largest ski resorts is saving labor and time -- while boosting snow quality and overall efficiency -- by integrating computer-driven automation to control its extensive high-volume snowmaking operation. The fully-networked system at Heavenly Valley (Lake Tahoe, CA) is so advanced that it constantly monitors the environment for changes in air temperature, humidity, wind direction, water pressure and other elements critical to making great snow. The result is an ability to generate larger quantities of higher quality snow in shorter periods of time, using fewer man-hours.

“Snowmaking used to be more art than science, and it took a lot of time and effort,” commented Heavenly Valley Snowmaking Manager Barrett Burghard. “In the past, we had a team of six snowmakers who handled all the equipment, manually opening air and water hydrants, charging lines and starting up each unit, then reversing it all for shutdown. It was very labor-intensive, and adjusting snow quality required an experienced technician,” he said.

That situation has changed with Heavenly's installation of 49 “big throw” snow guns -- all SMI® Super Polecats -- and SmartSnow™ 5.0 automation software. This state-of-the-art program delivers complete control over snowmaking operations, with interactive trail maps and gun locations, an extensive weather station package, superior graphing capability and data export. Optional modules can also be included for excellent modeling and control of auxiliary systems, such as pump stations, compressors, security, trail lighting, even building lighting and HVAC.

“We made a conscious decision several years ago to invest heavily in automation and software,” explained SMI President Joe VanderKelen. “Technology had advanced so much that we saw an opportunity to take snowmaking to the next level. Our automation today is far superior to what was available just a few years ago, and it can be custom-tailored to suit specific applications,” he said. “We’re seeing it help our customers dramatically improve efficiency and control labor costs.”

“Ease of operation is the key benefit to the computer-controlled system,” Burghard continued. “We can now monitor and control all of the SMI machines from a single computer. We can take temperature and humidity readings from all over the mountain, and we can configure individual weather stations to run a combination of guns, based on the specific conditions from that area,” he said. “I can even log on to the system from home and control the operations from my computer there.”

The Equipment

At 4,800 skiable acres (1,942 hectares), Heavenly Valley ranks with the heavyweights in the ski industry, and the resort has a snowmaking system to match. It’s one of the most extensive in the world, with more than 200 snowmaking machines, both fan-driven and traditional air/water snowmaking units, mounted on sleds and towers. In fact, Heavenly’s system has enough capacity to cover nearly 70% of its cleared trails on both sides of the mountain -- 3,500 vertical feet (1,067 meters) in California and 2,840 vertical feet (866 meters) in Nevada.

With optimum snowmaking conditions, Heavenly can make snow at the rate of 3.6 feet per acre (0.45 meters per hectare), per hour. The resort can generate about one foot (.3 meters) of snow covering 43 acres (17.4 hectares) during a single 12-hour period. The assurance of man-made snow complements mother nature’s contribution of 300-plus inches (762 cm) per year, enabling Heavenly to have reliably excellent skiing conditions for its customers.

Of the 48 SMI machines at Heavenly, 37 are permanently mounted on towers and hard wired into the network to communicate with the system's computer, some with fiber optic cable and others with copper wire. The remaining 12 units are fully automatic, radio controlled carriage-mounted Super PoleCats, so they can be moved to whatever location may need additional snow cover on any given day.

"The portable fan guns communicate through a series of four radio repeating stations," Burghard explained. "Any time those machines are relocated, all we have to do is turn them on and they will link up with the closest repeater automatically. Instead of having a staff member physically visiting each machine to start it up and confirm the snow quality, I can start up any part of the network while sitting at my computer. We can also set the equipment to turn on and off automatically, according to wet bulb temperature or by timer." Under optimum conditions, Burghard can make snow on as many as ten trails simultaneously.

Records show that Heavenly Valley's snowmaking system has put in approximately 1,150 hours this ski season, with many machines running the entire time. "The computer tracks operating time for each unit, as well as water usage and power consumption," Burghard added. "The system maintains all of that data, so at the end of the season, we can go back and look at those details for each machine. The weather stations also maintain data such as temperature, wind and humidity, so we can look for trends and opportunities to improve efficiency even further."

The Super Polecat from SMI is the company's workhorse, available with a 25 HP (19 Kw) fan. The machine can be specified with a variety of on board compressors from 5 HP (4 Kw) to 10 HP (7.5 Kw), and can also be outfitted to run on a central compressor feed. SMI's custom automatic valves control water flow to 30 spray nozzles, providing up to 142 gpm (540 liters per minute) of water, with a central 6-jet nucleator. Available options include a spray manifold heater, tower or carriage mounting and oscillation.

Burghard said that Heavenly Valley plans to continue its snowmaking investment each year in the foreseeable future. “Regardless of what you believe about global warming, there’s no question that the seasons fluctuate a lot. It’s so important to have good snow and keep the mountain open, especially during those key weeks around the holidays. Our snowmaking system has saved us a lot of heartache during recent seasons when snowfalls have been late or below normal.”

SMI is a global supplier of cutting-edge snowmaking equipment, construction, and engineering services. Headquartered in Midland, Michigan, SMI has flourished through over four decades of consistent growth in quality, production and reputation. The company has served over 750 resorts around the world, from simple to very complex designs, and typically has more than 30 snowmaking and engineering projects in motion simultaneously. SMI services customers ranging from marginal snow areas like Southern California, New Zealand and the lower Midwest United States to very cold climates such as Canada, Russia and Northern China. For more information, go to www.snowmakers.com.

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