



→ Maselli-GSA GmbH provides original equipment and modernization of engineering systems and processes, focusing in particular on weighing, dosing and conveying applications. One of the company's main areas of activity is winery technology including weighing, measuring and logistics. Following a successful pilot project, the CX1000 Embedded PC is now used for controlling a grape handling system.



## State-of-the-art technology, from the vine to the barrel

Without PC control, it would be impossible to deal with the four-week rush during harvest time. The grape weight and the "degree Öchsle" (sweetness level) figures have to be determined quickly, reliably and objectively. Each delivery is registered, linked with the wine-grower and the vineyard, sorted by quality and grape variety and fed to the right tank. The cellarmaster monitors each step of the grape handling process via a process visualization system, checks the tank filling levels and the function of the machines and valves of the complex winery piping system. Precise weighing of the grapes and accurate measurement of the "degree Öchsle" is not only essential for allocation into the cor-



In 2004, the new PC-based concept was successfully implemented in several wineries.



rect quality category, but also a prerequisite for correct payments. The "KISS" software (winery information system software) from Maselli-GSA is at the heart of the system. It offers numerous functions and databases that enable precise planning of all wine-growing stages throughout the year, including vineyard management, winery accounting, separate grape payment accounts for leased or communal vineyards.

Having gained experience with the application of Beckhoff Bus Terminals over PROFIBUS networks, a system involving the TwinCAT automation software PLC was realized on a standard PC for the first time in 2003 at the "Altes Schlösschen" winery in St. Martin/Germany. Based on the very positive experience with this pilot system, Maselli-GSA decided in 2004 to equip all winery systems with Beckhoff components. The CX1000 Embedded PC was selected for this purpose, since the CX product family ideally met all requirements.

The grape handling phase requires reliable hardware and software components. Prolonged system downtime caused by failure of the control system is not acceptable, because it would immediately lead to long queues of tractors outside the unloading stations. Remote maintenance systems for the KISS software are already in place in many installations. Through integration of the CX1000 into the Ethernet/TCP/IP network, the existing systems can also be used for the control level. This enables services for the complete process to be offered quickly and efficiently during the "hot phase" without additional hardware or software costs. The TwinCAT OPC server acts as interface for the process visualization system. KISS communicates via TwinCAT ADS.