

High-tech and tradition – ZUM FRANZISKANER



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| Line of Business: | Commercial Refrigeration |
| Application: | Gastronomy cooling |
| Country / City: | Germany / München |
| Fluid: | |
| Product: | Slimline unit cooler GDF, Wall/ceiling unit cooler GHF, Drycooler GFH |

Zum Franziskaner

Already in 1363, even before Columbus discovered America, the Franziskaner existed in the heart of Munich – at that time as good neighbour of the Franziskaner monastery. Now today, for 36 years, the Reinbold family with 120 employees as well as a 20-head kitchen brigade, look after the culinary well-being

of the Franziskaner's guests. The traditional Bavarian fare of the restaurant is a feature that attracts international guests from industry and politics, art and science.

What does a LON-WORKS bus system have to do with a litre of beer? And how does Eduard Reinbold, landlord of the traditional Munich restaurant ZUM FRANZISKANER know, even when on the road, whether the famous Lowenbräu and Franziskaner beer or the ingredients for his tasty Munich delicacies are perfectly cooled? heatXchange shows how a high-tech cooling system can be combined with real Munich tradition.



Delivery of the aircooler at the time of the Munich Opera Festival

After around three years under reconstruction, Munich's most traditional restaurant ZUM FRANZISKANER celebrated in April a quite special topping-out ceremony: Its home, only a few metres away from the opera house and in view of the distinguished Munich Frauenkirche, shone in new brilliance after restoration and the addition of new buildings. Thus the traditional restaurant offers on around 2,000 square metres space for numerous hospitality rooms inside and outside as well as completely new building services. The cooling system especially stood in the foreground in the redesign of the services, for this indeed guarantees the perfect storage of the famous Bavarian traditional beer and the wide range of ingredients for Munich's specialities: from the fresh white sausage up to the authentic roast pork.

Customized cooling system

The demand of the client was clearly defined: "We want to offer our guests our customary high traditional quality in the future, too. There-

fore we rely on an extremely modern and at the same time extendable cooling system". This was achieved in coordination between the Schindler Ingenieurgesellschaft Munich – the planning consultants for the overall services – and the authorized Savel-Kühlung company, a refrigeration specialist with extensive experience in the brewery and catering trade. In cooperation with experts from control and instrumentation engineering through energy optimization up to plant design, a total cooling system tailored perfectly to the demands of the FRANZISKANER was designed.



Delivery by truck and bringing in by crane directly at the Munich Opernplatz

Refrigeration for food and drinks

The contractor decided after consultation with the Schiessl wholesale company to equip the FRANZISKANER with components from three product lines of the Güntner company, to fulfil all the requirements of modern catering in several versions. Thus the latest ceiling mounted evaporators and air coolers from Güntner were used in the basement of the FRANZISKANER for the optimum storage of food and drinks. Three evaporators of the GDF series are used solely for the drinks in several storage rooms; in the beer and soft drinks area at a room temperature of +1.5 °C, in the wine cellars at temperatures of +16 and +18 °C. Six further versions of the GDF were installed for vegetable refrigeration, kitchen preparation and daily storage as well as for disposing of leftovers. Three

aircoolers from the GHF series perform their duty in the refrigerating areas for meat products from the restaurant's own butcher's shop as well as for the day cooling cell of the main kitchen to keep the sensitive products fresh in temperature ranges between 0 °C and +2 °C.



Vessel, barrel and tank cooling with drink line directly to the bar

The entire heat from refrigeration is discharged through a drycooler of the GFH series installed on the roof of the building in the Perusastraße. The constant regulation and fan monitoring installed ex works on the aircooler saves a great deal of installation and wiring expense high up on the roof and thus costs. The contractor smiles, satisfied: "Even delivery in the pedestrian precinct, bringing in by crane on Friday night at twelve o'clock and installation on the structure produced according to the equipment drawing went perfectly."



Bar with taps arranged directly above the cooling cell

Decentralized control and intercommunication

The building services installations are equipped with decentralized, specialized controllers and communicate through an open bus system, the LON data bus. Thus the classical multi-wire parallel wiring of all signal and control cables is replaced by one data cable. Components of different manufacturers and trades can be combined to suit the building and united to form a single system with the aid of the LON data bus. In the FRANZISKANER this concerns the refrigeration for the 12 cooling cells and for the refrigeration registers of the air conditioning systems. The kitchen waste air, the heating plant and the sanitary installations are also monitored by it.



Even if things get hot in the kitchen, the meat for the roast pork remains fresh with the aid of the efficient GHF aircooler.

The highly efficient refrigeration plant of the FRANZISKANER is equipped with constantly controlled compressors, refrigeration controllers at the places of use and constant fan control on the air blast cooler. Thanks to LON-Mark, the communication protocol independent of manufacturer, all components speak and understand the same language. Thus there can be an interchange of information and this can be visualized jointly on only one user interface. A central Internet server unites the data flow with the aid of product-independent software (e.g. tocata). Special programming knowledge is not necessary for this. The plant is configured using this software. There is an identification button on the field bus coupler on the components of compressor, refrigerator and drycooler controller.

The components are detected and integrated by pressing the button. On expansion of the system, components are integrated simply in the existing LON network.



If the energy signal lamp switches to red, main energy consumers are switched off by the chef.

Not only quality, functionality and handling must be right, but also the costs. The energy management system available for the entire building also speaks the LON language and permits the exchange of data. This data flows into the recording and evaluation system and forms the basis for energy cost optimization. The energy signal lamp installed in the central staff working area is symbolic for the energy cost consciousness of the operator.



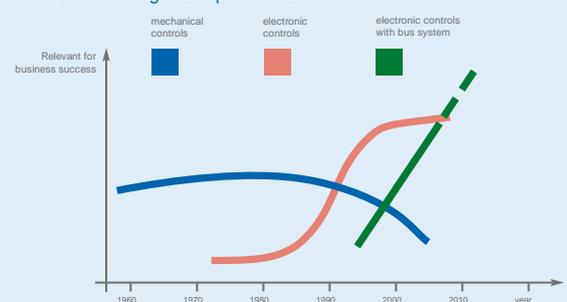
The dumplings as garnishing for the roast pork can be stacked up to just below the ceiling thanks to the GDF.

Building services by remote call

All operating states, switching times and setpoints can be called up through any PC with Internet browser, thus also in the office of the managing director. The FRANZISKANER's owner is constantly up to date even when on the road. If required, the operating states are transmitted by telephone modem as SMS message to his mobile phone. A protected Internet access allows even changes to switching times

and setpoints at different levels by telecontrol. Naturally these possibilities are also available to the refrigeration engineer. Settings relevant for operation can be made only by the refrigeration system builder. Service calls are made more efficient. FRANZISKANER host Eduard Reinbold summarizes: "This sophisticated technology combines high-tech with tradition in the FRANZISKANER: The system can be adapted perfectly to the high demands of our guests and I have the costs under control."

Relevance of refrigeration plant controls



LonMark certificate assures interoperability

Bus technology is developing more and more as the standard in refrigeration as well. Especially the large food chains, but also catering and food processors require open system solutions on the basis of internationally customary bus standards. By doing away with the classical parallel wiring of all signals, investors and users expect a reduction of the cabling expense, smaller control cabinets, higher flexibility, simpler extensions as well as new functionalities for saving energy and operating costs. Now that the LonWorks technology has proven its efficiency in building automation, a similar development in refrigeration and air conditioning is now becoming apparent.

By contrast to the bus systems originating from electronics with relatively long processing times, the LON technology shows its speed and high efficiency even in complex control and instrumentation tasks. In addition there is the freely designable topology with maximum bus lengths of 900 m and stub lines of up to 3 m

to the individual LON devices. In the meantime LON users have compiled so-called profiles for the different applications under the umbrella of LonMark Interoperability Association.

Only in this way can the much quoted interoperability across manufacturers' boundaries be achieved. Interoperability therefore exists only if all directives of the LonMark Interoperability Association are complied with and the product is identified with the LonMark logo as certification symbol. The refrigeration industry has learned quickly from the rather difficult start in the LON world and has submitted several profile drafts for certification, e.g. for refrigeration point controllers, condenser controllers and compressor controllers. Güntner participates in this development by an active role in the refrigeration and air conditioning working group of the LON user organization (LNO).

Internet addresses:
www.lno.de/ak/kkt
www.lonmark.org

