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# Efficient HVAC control system meets individual needs

Chilematt Center, Unteraegeri/Switzerland

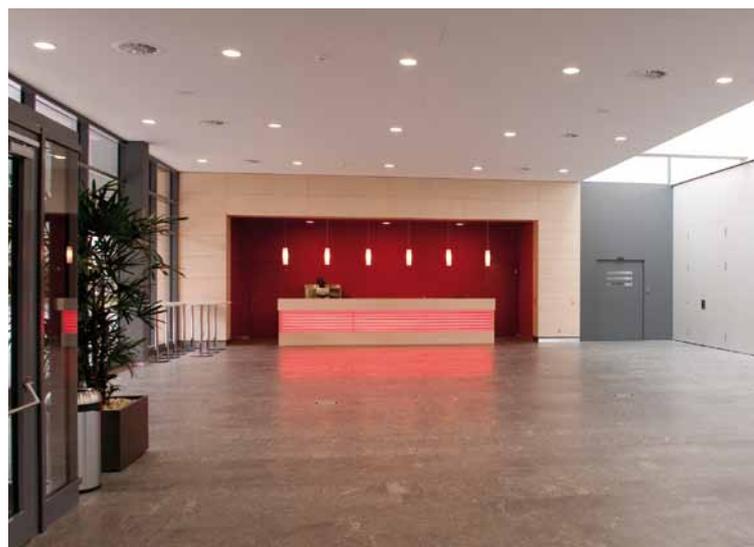
Chilematt is a meeting center located in Aegeri valley in the central part of Switzerland. It accommodates a number of shops, a bank, apartments, and the Aegerihalle with its three halls – the ideal place for any kind of event. The complete center has been equipped with leading-edge HVAC controls from Siemens to satisfy the requirements of the different types of building users.

Chilematt Center has attractive shops, office spaces, and 24 modern apartments. It is located in the center of Unteraegeri village.

Aegerihalle with its impressive stage is attached to Chilematt Center and features three halls, offering space for up to 900 people. The entrance area encompasses the spacious lobby including a bar, cloakroom, sanitary facilities, and a modern kitchen. Aegerihalle therefore offers a number of choices for holding social or cultural events in a wonderful surrounding.

The outer appearance of Aegerihalle is impressive as well. The building's facade consists of black glass panels and was designed by Albert Merz, a local artist.

Answers for infrastructure.



The facade of the Aegerihalle shows art by Albert Merz.

### Chilematt Center, Unteraegeri

When Chilematt Center was planned and designed, great importance was attached to sustained and efficient energy usage.

#### Demand-dependent control

All Chilematt Center buildings plus the neighboring school receive their heat from a wood-chip boiler. The heating, ventilation, and cooling system is controlled by the modular Synco™ 700 HVAC control system from Siemens. Thanks to preprogrammed and proven standard applications, the Synco controllers are easy to configure and easy to control, enabling them to be optimally matched to the different requirements of building users. During the heating season, the basic temperature in the different rooms is ensured by an underfloor heating system in combination with radiators. The room temperature effectively required is then controlled by the ventilation system, which offsets temperature differences within short periods of time. Siemens room and indoor air quality sensors in the individual rooms make certain that the right amounts of heat, cooling energy, and outside air are delivered, depending on demand.

#### Efficient energy usage

The preprogrammed energy saving functions provided by the controllers support energy-optimum operation. Furthermore, variable speed drives from Siemens ensure that fans and pumps automatically reach their required speeds, aimed at delivering the desired amounts of heat, cooling energy, and outside air. In addition, heat exchangers are used to recover heat from the extract air. This saves energy. Since the Synco 700 controllers communicate with each other via the KNX bus system – a worldwide standard – all processes are automatically fine-tuned at all times.

#### All parties involved are satisfied

In the words of Kurt Heutschi, general project leader, "Chilematt Center is an excellent example showing how energy can be used efficiently and in a sustainable manner. Decisive is the demand-dependent control of the building systems, meeting the requirements of the different types of building users. And this is fully ensured by the Synco 700 control system supplied by Siemens."

#### Highlights

- Sustainability ensured through the use of renewable energy
- Ease of operation of the control system
- Demand-dependent control, satisfying all requirements
- Energy saving functions, variable speed drives and heat recovery for full energy efficiency
- Automatic fine-tuning of all processes thanks to KNX communication