

## Renovation:

Ospizio Vecchio (old hospice), St. Gotthard



# Maximum performance at high altitude: ELCO allows for comfortable heat

It was no easy task to put into execution the comprehensive renovation of the “old hospice” at Gotthard Pass, with an altitude of 2106 m. An addition to the logistical and seasonal challenges was another important task: finding a suitable heating system that guarantees extraordinary operating safety, even in problematic weather conditions, and is extremely environmentally friendly given the surroundings that are worth protecting.

ELCO provided the solution. Today, a state-of-the-art heating system provides comfortable heat and a cosy feel at the “old hospice” at all times. The new system also provides the hotel with reliable hot water (even at peak demand times) and guarantees an 8 °C reduction of heating during the six-month seasonal break. These challenging tasks are executed by the two AQUATOP T30



heat pumps by ELCO combined with a buffering tank and a processing water tank, each containing 1,000 litres.

### Customer

Fondazione pro San Gottardo  
Stiftung pro St. Gotthard  
CH-6780 Airolo/TI

### User

Albergo San Gottardo  
Ospizio, Arnold Abplanalp  
Managing Director  
CH-6780 Airolo/TI

### Planning

Visani-Rusconi-Talleri SA  
Engineering offices for  
heating, ventilation, A/C  
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### Installation

ARGE San Gottardo, Russi  
AG / Arnold AG, Bernhard  
Gisler, Project Manager  
c/o Russi Heizung-Sanitär AG  
Gemsstockstrasse 1  
CH-6490 Andermatt/UR

## BENEFITS

### Efficiency

- Comprehensive efficiency: COP value 4.5
- State-of-the-art, environmentally-friendly technology emissions
- Excellent thermal output

### Convenience

- Very little sound emissions (less than 35 dbA)
- User-friendly system
- Highest performance in compact form

### Savings

- Minimal, space-saving installation
- Heat pump works without CO<sub>2</sub> emissions
- Significant energy saving

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# A heating system to meet the highest demands

## The new system

An absolutely reliable and safe heating system is needed for special high mountain locations. The new ELCO system meets these requirements. Two AQUATOP T30 heat pumps with a heat output of 30.6 kW each and a COP value of 4.5 offer the highest degree of heating comfort and the supply of hot water - over the entire year. Given the fact that temperatures at Gotthard Pass hardly ever exceed 15 °C, even in the summer, the need for heating is permanent.

AQUATOP T heat pumps harness the energy stored in the ground and use this to generate thermal heat. Given the fact that neither ground- nor surface-water is available, the energy stored in the ground can be used either through an earth-tube collector - a horizontal tube system - or through ground-source heat probes driven vertically into the earth, as is the case with this system. In both cases the heat energy is carried over via the brine which circulates in the tubes/probes.

## The benefits of AQUATOP T heat pumps

The running costs of AQUATOP T heat pumps are well below those of conventional heating systems. Moreover, AQUATOP T heat pumps help to preserve the environment, since they produce no CO<sub>2</sub> emissions. Another benefit: The energy stored in the ground and water is constantly renewed by the sun and will also be available to future generations.



Equipment	New System
Brine-water heat pump	2 x AQUATOP T 30
Heat output for BO/W 35	30.6 kW
Coefficient of performance for BO/W 35 COP	4.5
Dimensions (W x H x D)	670 x 1,050 x 950 mm
Total weight	245 kg

## The "old hospice" at Gotthard Pass

The hospice (originally a hostel for travellers) was first mentioned around 1237. Unfortunately it was increasingly abandoned in recent decades due to decay and could no longer be used as accommodation for guests. In order to preserve this unique, historical building, it had to be completely rebuilt and renovated over the course of three years. The foundation walls were the only parts of the old building that were kept. Today the new "Ospizio Vecchio" will be presented as a comfortable 3-star hotel - with a ultra-modern heating system.

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