



New sports complex at the Botsberg school campus in Flawil.

Sports complex in Flawil/SG

Cupress – ideal for solar heating installations

The community of Flawil is a big believer in solar energy: the ultra-modern Botsberg sports center is by no means the first public building in the district with hot water supplied courtesy of the sun. Despite the somewhat higher cost, local residents voted in favor of a building with solar thermal collectors. The installation

uses Cupress, the versatile copper press-fitting installation system from Nussbaum, plus press-fittings and tapware made of special gunmetal. The Nussbaum Opti-press plumbing installation system was chosen for the water supply pipes.



Lenz Solartechnik prefers Cupress

H. Lenz AG in Niederuzwil/SG supplied the solar installation at the new sports center in Flawil. For the past twelve years, the company has specialized in efficient heating technologies and solar energy in particular. Lenz AG likes working with copper and the Nussbaum Cupress installation system: price/performance is right and handling the copper pipes and press fittings used by the Cupress system is easy and straightforward. «Even the absorbers in the collectors are made of copper», says Peter Kobelt, project manager at Lenz AG. He goes on to explain how the Cupress installation system is virtually indestructible and poses absolutely no problems with the water/glycol closed circuit

that carries heat from the rooftop collectors to the energy storage tank down in the basement.

The Cupress installation system uses copper piping and press fittings, making pipe heat treatment unnecessary – no need for fire safety precautions! Instant pressing technology replaces time-consuming soldering. The Cupress installation system has a wide range of applications, not only in solar energy but also as a popular and highly cost-effective plumbing installation system for water and compressed air distribution.

Cupress installations with copper piping and press fittings can be found all the way from the roof to the energy storage tanks in the basement.





Peter Kobelt, Lenz AG, Niederuzwil:
«We have been using Nussbaum products for five years. We have the certainty of total compatibility, plus we save time and money.»

Engineering specifications

24 flat-panel thermal collectors with a 48 m² absorber area
 Inclination: 45°
 Closed circulatory system with 2 hot water heaters, 3000 l and 2000 l capacity
 Additional heating via an external plate heat exchanger from a new, low-emission gas heating plant installed in the adjacent primary school building
 Shower water consumption: 3000 l/day, hot water temperature 55°C, power consumption 157 kWh/day

The tide is turning in favor of solar energy

There has been some fundamental rethinking in Flawil. An electronic display has been ordered to show the quantity of solar energy currently being delivered. Schoolchildren and other users of the sports complex should grow up aware of how solar energy can make an impressive contribution to meeting our energy needs.

47 to 65% contribution for six months of the year

The showers in the sports complex require a lot of energy for hot water. It was never intended to supply hot water to 43 shower heads using solar energy alone, but thanks to cost/benefit optimization the solar installation contributes, on average, 41% of annual energy needs. Between April and September, its contribution rises as high as 47–65%. The solar installation on the sports center roof supplies around 26,000 kWh annually, equivalent to the energy consumption of four average households.

A professional hot water installation using Optipress.



Nussbaum Optipress for fresh water distribution

Optipress is used for the piping between the hot water boilers and the showers, as well as all other drinking water supply pipes. The Optipress plumbing installation system uses stainless steel pipes with press fittings and tapware made of special gunmetal. The distributors installed in the basement are also made using Nussbaum fittings. Plumber Marcel Läber comments, «We appreciate Nussbaum products for their system compatibility and, of course, prompt delivery».

Parties involved in construction

Site owner: Flawil school district, CH-9230 Flawil
 Architect construction supervisor: Josef Leo Benz, dipl. Arch. ETH/BSA/SIA, CH-9500 Wil
 Solar installation/heating/ventilation/plumbing: Calorex Widmer + Herzog AG, Engineers, CH-9500 Wil
 Solar engineering: H. Lenz AG, solar & heating engineering, CH-9244 Niederuzwil
 Plumbing installation: Marcel Läber, CH-9523 Züberwangen
 Start of construction: Autumn 1998
 Completion: July 2000



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