



*The new triple sports complex in Egg/ZH.*

**Triple sports complex with solar heating installation**

# Solar power and Cupress for energy savings

Construction is barely complete, and each of the three sports halls is already booked solid. Local gymnastics, football and floorball clubs have eagerly awaited their new sports center. There are 7600 residents in the community of Egg in the canton of Zurich, with its affiliate communities of Hinteregge and Esslingen. Their 10 million franc investment in a modern sports facility is greatly benefiting schools and sports clubs in the area. The hot and cold water distributors in the basement, and the solar heating pipework, all use Nussbaum plumbing installation systems.



*15 solar collectors with copper pipework using the Cupress installation system (shown prior to lagging).*

Remo Jörg, plumbing operations manager at Kaufmann AG: «After our positive experiences with Cupress and Optipress, we believe Nussbaum has some really great products.»



## Kaufmann recommends Nussbaum

Kaufmann AG, metalworkers and plumbers in the village of Egg, began working with Nussbaum products just two years ago. Yet the company is already keen to recommend Nussbaum. «I was always positive about Nussbaum,» says head fitter Urs Leimbacher, «but it wasn't just up to me to decide.» Meanwhile, everyone else in the company has come around to his view. Their highly demanding work at the sports center, using Nussbaum Cupress and Optipress plumbing installation systems, speaks for itself.

## Exemplary one-stop service

«In the tender documents, we emphasized that all hot and cold water plumbing installations and solar heating pipework should be sourced from a single vendor,» says Silvano Murchini, owner of a specialist bureau for installation planning and building control systems in Esslingen. «Nussbaum always delivered exactly as specified, and we were very satisfied with their wide-ranging, prompt service. Whenever we had a question, we could be sure that Hanspeter Schubiger, the customer representative at Nussbaum's Zurich branch, would be there to help.»

*The solar installation's twin hot water storage tanks, with incoming and outgoing pipes using the Cupress installation system.*



## Cupress for the solar installation

Following positive experiences with copper piping at other sites, copper was explicitly specified for the sports center's solar heating installation at the tendering stage. The entire heating circuit from the solar collector panels to the heat exchanger is thus made of copper. The pipework was installed using Nussbaum Cupress, a versatile and popular system with copper pipes and press fittings, plus press fittings and valves made of gunmetal.

When the sun shines, a bank of 15 solar collectors on the roof of the complex heats the circulating mixture to around 80°C. Thermal energy is transferred to 2000-liter water storage tanks. Most of the resulting hot water is piped to the showers at a temperature of 38°C. Averaged over a year, the solar

plant provides around 40% of the hot water consumed by the complex, including the cafeteria (summer: 60%, winter: 20%). The summer shortfall in hot water is supplied by an oil-fired heating system in the adjacent school building; a wood-chip boiler makes up the energy difference in winter.

In the populous low-lying area of Switzerland, it is a rule of thumb that every square meter of collector area saves around 50 liters of fuel oil annually. The 39m<sup>2</sup> of solar collectors thus achieves savings of 1950 liters: a small but welcome benefit to the environment.



*The neat and tidy mains water supply installation: welded chromium steel distributor using the Optipress and Optipress XL installation systems.*

### «Pressfit is just great»

The basement hot and cold water distributors were installed using Nussbaum Optipress and Optipress XL, installation systems based on stainless steel pipes, with press fittings and valves cast from gunmetal. The same is true of the feeder pipes to the outdoor playing field irrigation system, cleaning facilities for sports shoes, etc. Nussbaum also supplied the welded stainless steel distributors.

Remo Jörg, plumbing operations manager at Kaufmann AG: «Optipress brought us untold time savings. In my view, the Optipress system is the best out there for the kind of work we do.» Nussbaum press tools – type 2, type 3 or the cordless rechargeable type 3A – provide a simple, fast and reliable way to press all gauges of piping from DN 10 to DN 100.

### Involved in construction

Building owner:	Egg/ZH school authority
Architect/general contractor:	Hanimann & Flückiger AG Architects and Builders, CH-8132 Egg/ZH
Plumbing and solar planning:	Silvano Murchini, Installation Planning and Building Control Systems, CH-8133 Esslingen
Construction start:	August 1999
Completion:	December 2000



*Remo Jörg, plumbing operations manager (right) and Urs Leimbacher, head fitter (center), both of Kaufmann AG, metalworkers and plumbers; Hanspeter Schubiger of Nussbaum's Zurich branch (left).*

### Technical details

15 2.6 m<sup>2</sup> flat-panel thermal collectors = 39 m<sup>2</sup> total absorber area. Angle of inclination 45°

Closed circuit filled with Antifrogen L

Plate-type heat exchanger

2 2000-liter hot water storage tanks arranged in series

Supplemental energy supplied by an oil-fired burner in summer and a district heating system in winter



Professional association of solar energy Switzerland

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