



Outdoor Pool Rusava

SOLPOOL C01



The swimming pool is located in a valley with slightly colder climate. It is operated by mu-nicipality of Rusava as part of The Physiotherapy Centre of the Podhostýnský Microregion. The system is the largest solar-thermal heating system in the Czech Republic in whole, not only in segment of swimming pools. The new collector system replaced the old one installed in the early eighties. Mainly due to this installation is small community of Rusava the leader of the Solar league in solar collector area per person.

Installation	Planning	Operator and Pool	Pool address
Ekosolaris, a.s. www.ekosolaris.cz	Ekosolaris, a.s. www.ekosolaris.cz	RUSAVAK, s.r.o., Rusava 248, 768 61 Bystřice pod Hostýnem 7	Rusava 248 768 61 Bystřice pod Hostýnem 7

Swimming Pool and Solar System

Year of installation	2004 (original solar system 1985)
Pool surface area and volume	790 m ² , water depth 0,95 m – 1,6 m, volume 1.000 m ³ 22 m ² , water depth 0,4 m
Flat plate collector surface area	540 m ²
Collector type	Ekostart Therma II
Auxiliary heating system	30 kW heat pump air-to-water
Specific yield	380 kWh/(m ² ·a)
Energy savings	ca. 40.000 kWh electricity per year (for heat pump)
Environmental gain	ca. 40 t CO ₂ per year (compare to heat pump only)
Investment costs including the heat pump	8.000.000 CZK (320.000 EUR)
System costs	14.800 CZK/m ² (450 EUR/m ²) (including heat pump)



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SOLPOOL – Solar energy use in outdoor swimming pools.
A cooperation project of DGS and TTZ, Germany;
APE, Slovenia; CRES, Greece; Save-Rema, Hungary;
CZREA, Czech Republic; ALE, France and LECCE, Italy. SOLPOOL is
funded by the European Commission within the ALTENER programme.

Intelligent Energy Europe

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The outdoor swimming pool at Rusava is the most known swimming pool with solar heating system in the Czech Republic. The pool is located at eastern part of the Czech Republic in tourist region named „Podhostýnský mikroregion“ in deep valley of small river Rusava at altitude about 400 m. The heating system is the largest solar-thermal heating system in the Czech Republic in whole, not only in segment of swimming pools. That is why small village of Rusava leads Solar League in the Czech Republic.

In the year 2004 the pool was completely renovated and the new solar heating system repla-

ced the old one installed in 1985. Because of subsidy policy heat pump was installed too as auxiliary heating system. The outdoor unit of the air-to-water type heat pump is placed between two parts of solar collectors area. Machine room of the solar system is placed under eastern part of solar collector area near to the heat pump outdoor unit. On western side of the pool there is placed machine room of the pool with water preparing plant and heat storage tank of volume 80 m³.

The heat pump is not used recently; the solar system is able to cover all energy demands of the pool. Stored heat is used for fast

heating of swimming pool after climatically unfavourable period. The capacity allows heating the pool water by about 2°C. Because of the heat is stored in the tank energy loses during night are reduced too.

The pool is operated by municipality of Rusava as part of The Physiotherapy Centre of the „Podhostýnský mikroregion“. In the last season (2008) it was operated from June 2nd to October 1st. Because of worse climatic conditions only 27.000 visitors come in the year 2008, usually it is about 40.000 visitors yearly.



Left: satellite view (© www.geodis.cz, © mapy.seznam.cz) of the area of the Physiotherapy Centre of the Podhostýnský Microregion, collector area at upper part. Right: above: the swimming pool with east part or collector area, below: machine room of the pool.



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