

## COMPARISON of Solar Thermal Programmes

02/2009



	<b>T*SOL express 1.0 R3</b>	<b>T*SOL Pro 4.5 R2</b>	<b>T*SOL Expert 4.5 R3</b>
<b>Areas of Use</b>	Quick design programme for solar thermal systems	Dynamic simulation programme for the design and optimisation of solar thermal systems	Dynamic simulation programme for the detailed investigation of solar thermal systems and components
<b>Target User Groups</b>	Trade technicians and sales staff	Engineers, planners, roofing technicians, and (electrical, building and solar) installers	Experts (research, scientific purposes, specialist planners, developers and consultants) who wish to investigate changes in the physical state of a solar system
<b>Main Purpose</b>	Quick design to determine the number of collectors and yield	Energy optimisation in solar thermal systems	Optimisation of components and systems, and system monitoring using real measurement data
<b>Languages</b>	English/German	English/French/German/Spanish/Italian	English/French/German/Spanish/Italian
<b>Content</b>	Approximately 650 European climate data records, plus approx. 275 data records worldwide	Approximately 650 European climate data records, plus approx. 275 data records worldwide	Approximately 650 European climate data records, plus approx. 275 data records worldwide
	5 systems	A selection of over 54 different systems in the standard module	A selection of over 54 different systems in the standard module
	7 collector types	More than 900 collector files	More than 900 collector files
		Primary energy database - user-defined fuels can be added	Primary energy database - user-defined fuels can be added
		The user can edit the collector database, i.e. existing collectors can be edited or new collectors added	The user can edit the various databases, i.e. collectors, storage tanks, external heat exchangers and boilers can be self-defined
		Includes MeteoSyn, the climate data generator generates hourly data on the base of monthly data	Includes MeteoSyn, the climate data generator generates hourly data on the base of monthly data
		Shade generator: detailed shade analysis with data entry	Shade generator: detailed shade analysis with data entry

**COMPARISON of Solar Thermal Programmes**

**02/2009**

	<b>T*SOL express 1.0 R3</b>	<b>T*SOL Pro 4.5 R2</b>	<b>T*SOL Expert 4.5 R3</b>
		The user can switch between SI and US units or add user-defined units	The user can switch between SI and US units or add user-defined units
			Parameter Variation: individual component parameters can be optimised for different modes of solar system operation, e.g. the combination tank's internal volumes
			Measurement data processing and data import of real measurement values for evaluation and comparison with simulation results such as: <ul style="list-style-type: none"> <li>- Outside temperature</li> <li>- Global radiation onto the horizontal</li> <li>- Hot water consumption</li> <li>- Circulation losses</li> <li>- Space heating requirement</li> </ul>
			The system energy balance can be viewed in a Sankey diagram – all the energy flows are clearly shown in the diagram and can also be produced in table format
			Variant comparison in a table
			Project tree – for an overview of the most important parameters for each component

**COMPARISON of Solar Thermal Programmes**

**02/2009**

	<b>T*SOL express 1.0 R3</b>	<b>T*SOL Pro 4.5 R2</b>	<b>T*SOL Expert 4.5 R3</b>
<b>Additional Swimming Pool Module</b>		Additional Swimming Pool Module - with a further 17 systems	Additional Swimming Pool Module - with a further 17 systems
<b>Additional SysCat Module</b>		Additional SysCat Module for large-scale systems – includes large solar buffer tanks, external heat exchangers and the use of anti-legionnaires’ disease switching – with a further 14 system schematics	Additional SysCat Module for large-scale systems – includes large solar buffer tanks, external heat exchangers and the use of anti-legionnaires’ disease switching – with a further 14 system schematics
<b>Additional District Heating Module</b>			Additional Module for simulation of solar district heating systems – altogether 9 different variable systems
<b>Results</b>	Yield calculation and collector area	Temperatures, energy values, efficiency and solar fraction	Temperatures, energy values, efficiency and solar fraction
	Simple project report; exportable (*.pdf or as E-Mail)	Summary six-page project report available in 5 languages or Detailed project report - both multilingual and exportable (*.pdf, *.rtf or as e-mail)	Summary six-page project report including energy balances or Detailed project report – both multilingual and exportable (*.pdf, *.rtf or as e-mail)
<b>Economic Efficiency Calculation</b>		Results include the cost of solar energy and the dynamic amortization period	Results include the cost of solar energy and the dynamic amortization period
<b>Note</b>		Files (collector, project) from the Expert version cannot be imported into the Pro version.	
<b>Service</b>		Set – Price Software Service Agreement	Set – Price Software Service Agreement