

ARCON Solar - History

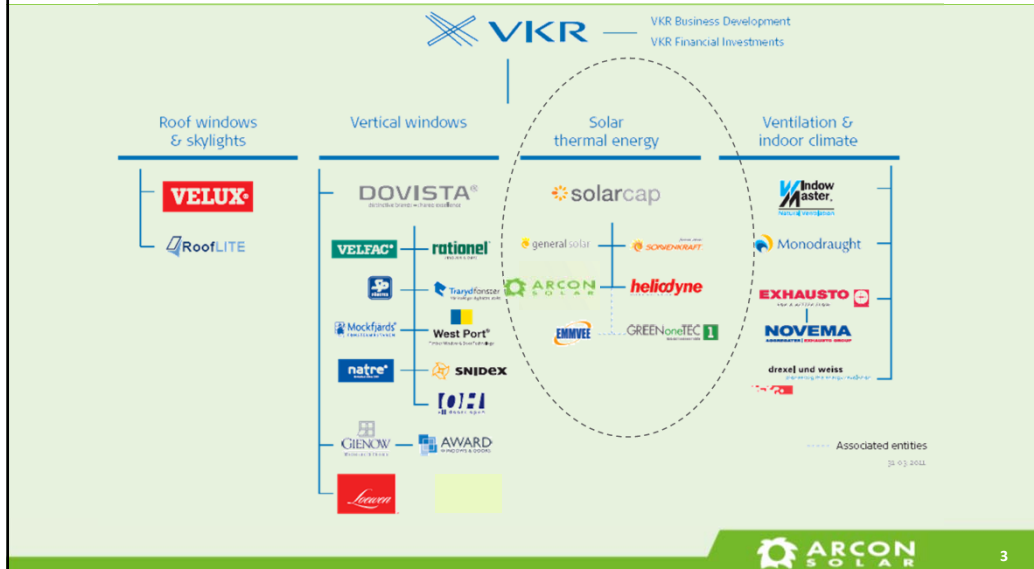
25 years in the solar district heating industry – and still going strong

- Founded in 1974
- A Danish company with production facilities in Skørping, Denmark
- Around 45 employees
- Privately owned until 2007 where VKR Holding bought ARCON. Business strategy was moved 100% to large scale and mid size solutions
- Experience from producing and installing more than 250000 m2
- One of the pioneers in the solar industry - Our oldest solar district heating plant celebrates 25 years anniversary in 2013 - It's still in operation. [1988 – Saltum - 1005 m2]



The VKR group

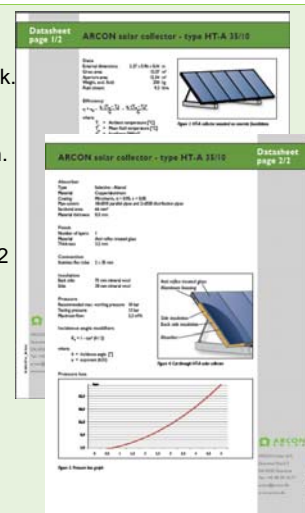
Since 2007 ARCON has been a part of VKR Holding, which also counts the Solarcap group consisting of solar specialist like Sonnenkraft, Emmvee, GREENoneTEC and Heliodyne.



ARCON Today— A large scale solar specialist

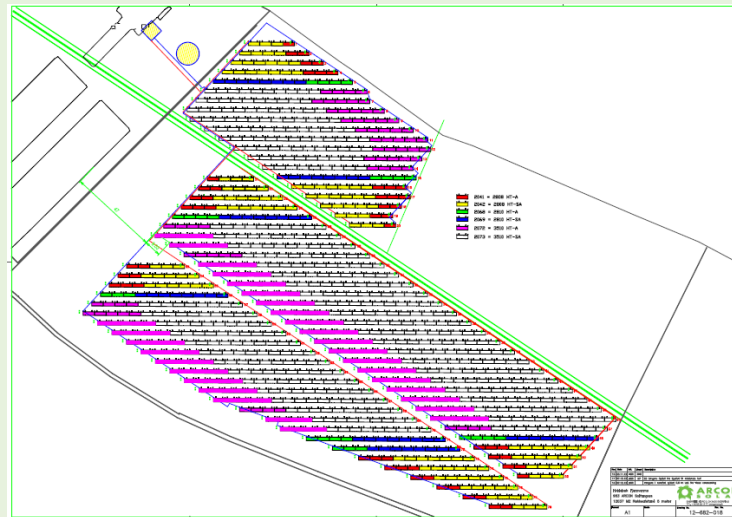
Development and manufacturing of large scale collectors is ARCONs main business area.

- The HT collector, which today's ARCON collector is based on, was originally developed in Sweden in the 1980's by Jan Oluf Dahlenback.
- ARCON continued the development and today we have more than 150000 m2 in operation with the latest ARCON collector design.
- Design information on ARCON Collectors
 - Produced in 15 different models with a standard size of 12,5 m2
 - Foil solutions for minimised heat loss at higher temperatures
 - Different strip sizes to maintain turbulent flow conditions
 - Possibility to combine the different models to optimise field performance.
- Key features
 - High efficiency - Among the very best in the market
 - Very cost efficient - Excellent price/performance ratio
 - Long durability - 25 years of references



Optimising solar field performance

An example of how Arcon combines the different collector types to maximise overall field and plant performance.



ARCON
SOLAR

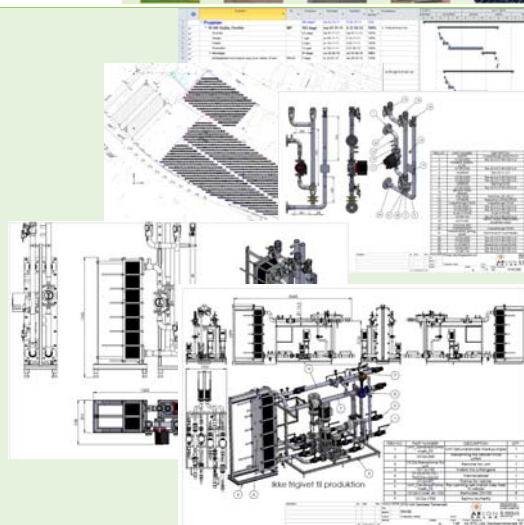
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ARCON – Project Execution

A Project Organisation with turnkey experience



- Project management
 - Planning and organising
 - Procurement and manufacturing
 - Installation and commissioning
 - Training and handover.
- Engineering
 - Pipe sizing calculations of pipes in ground
 - Solar field optimisation calculations
 - System pressure loss calculations
 - Unit engineering
- 2D/3D Design
 - Field layout
 - Pipe routing/isometrics
 - Unit design



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References

ARCON references in solar district heating. ARCON has installed 15 out of the 25 largest solar field installations in Europe.

2013 - Hvidebæk District Heating, DK - 12,000 m ²	2010 - Ringkøbing District Heating, DK - 15,024 m ²
2012 - Christiansfeld District Heating, DK - 9,500 m ²	2009 - Broager District Heating, DK - 9,988 m ²
2012 - Sandved District Heating, DK - 3,700 m ²	2009 - Gram District Heating, DK - 10,073 m ²
2012 - Feldborg District Heating, DK - 4,000 m ²	2008 - Strandby District Heating, DK - 8,019 m ²
2012 - Ørnhøj-Grønbjerg District Heating, DK - 5,000 m ²	2007 - Brædstrup District Heating, DK - 8,012 m ²
2012 - Helsingør District Heating, DK - 5,000 m ²	2006 - Ulsted District Heating, DK - 5,012 m ²
2012 - Skørping District Heating, DK - 2,000 m ²	1996/2002 - Marstal District Heating, DK - 17,838 m ²
2012 - Gørding District Heating, DK - 7,424 m ²	2001 - Nordby Mårup District Heating, DK - 2,500 m ²
2012 - Gråsten District Heating, DK - 17,200 m ²	2000 - Kungälv Energi AB, Göteborg, S - 10,048 m ²
2012 - Vejby-Tisvilde District Heating, DK - 8,000 m ²	1998/2000 - Ærøskøbing District Heating, DK - 4,898 m ²
2011 - Brædstrup District Heating, DK - 10,604 m ²	1990 - Ry District Heating, DK - 3,014 m ²
2011 - Sydfalster District Heating, DK - 12,075 m ²	1990 - Nykvarn, S - 3,500 m ²
2011 - Svebølle District Heating, DK - 7,024 m ²	1989 - Falkenberg, S - 5,500 m ²
2010 - Tistrup District Heating, DK - 5,400 m ²	1988 - Ingelstad, S - 1,000 m ²
	1988 - Saltum District Heating, DK - 1005 m ²



Questions ?

Thank you for the attention!

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