

SolarVenti®

About the Delta Test T203483

Mail from Christian Lausen (Delta Test Laboratory)

Solpanel SV3 and competitor "S" - Meddelelse (HTML)

File Rediger Vis Indsæt Formater Funktioner Handlinger Hjælp

Besvar Svar til alle Videre-send

Dear Mr. Christensen

The tested models were:

Scanheat Model 400 Named "S"
SolarVenti SV3 Named Solarventi

Venlig hilsen / Vänliga hälsningar / Best regards
Christian Lausen
Technician, Centre of Test Excellence
Test & Consultancy

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Solpanel SV3 and competitor "S"

Task reference: T203483-4

Solarventi A/S

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Solarventi and "S" competitor panels.

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T203483-4

About Delta

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We pride ourselves of being at the forefront of innovation of advanced technologies. And we serve as a strategic partner to our clients and society.

We are the technology pathfinder within our cores technology domains and specialise in

- Electronics
- information technology
- Micro and nano technology
- sensor systems
- acoustic and vibration technology
- light technology and optics

The company was established in 1941 and employs 270 highly skilled people located in Denmark, Sweden, and England. Our annual turnover in 2011 was DKK 327 million.

With more than 70 years of experience we have extensive expertise in development of technology driven products within sectors such as health and welfare technology, climate, energy and the environment. Every year we help more than 2,000 customers worldwide with their product development process from product idea, product extreme testing to product launch.

DELTA is a highly reputable international company and part of GTS – Advanced Technology Group approved by the Danish Ministry of Science, Innovation and Higher Education.

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Products Tested

Solarventi SV3. Collector area 0,35 m²
Competitor "S". Collector area 0,66 m²

Test set up

The solar panels are mounted according to manufacturer specifications and set 70° upright, facing south.

The panels are set to produce the highest possible ventilation from fresh air.

The measurements were performed Friday 23 of august.

Measuring

The measurements are simple relative measurements that only speak of how the panels perform relative to each other, under the specific conditions of the day.

The strength of the solar radiation, sun azimuth and height, amount of clouds and air temperature makes it impossible to make absolute measurements with the real sun.

On the other hand absolute measurements, made in a weathering chamber, would lack the changing reality of nature.

The temperature difference produced by the solar panel, and the airflow produced by the fan, is measured by an anemometer tube equipped with a temperature gauge.

The three sets of anemometer tubes (one for each solar panel) have been internally calibrated. As well have the temperature gauges.

The uncertainty of the measurements are as follows.

Temperature $\pm 0,1^{\circ}\text{C}$

Air flow $\pm 2\text{m}^3/\text{h}$

Power $\pm 20\text{W}$

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The measurement was performed at 31/08 - 2012

The panels are exposed to the sun.

Angle to the horizon 90°

Air density 0,00129 Kg/L

Specific heat of : 1005 J/ (kg * Kelvin)

The panels are set to produce the highest possible ventilation.

| | Time | Temp. | | | Efficiency | Power (1m ²) | Sun intensity | Air flow |
|----------------|-------|-------|------|------------|------------|--------------------------|---------------|----------|
| | | Out | In | Difference | | | | |
| | | °C | °C | °C | | | | |
| Solarventi SV3 | 9,00 | 23,2 | 16,4 | 6,8 | 12 | 81 | 700 | 11,6 |
| | 11,00 | 26,3 | 17,5 | 8,8 | 33 | 235 | 720 | 26 |
| | 11,40 | 30,2 | 19,3 | 10,9 | 45 | 336 | 750 | 30 |
| | 12,25 | 31,8 | 20 | 11,8 | 49 | 404 | 830 | 33,3 |
| | 13,00 | 30,3 | 19,7 | 10,6 | 50 | 282 | 570 | 25,9 |
| | 13,30 | 33,7 | 22,4 | 11,3 | 51 | 409 | 800 | 35,2 |
| | 14,35 | 33,7 | 22,4 | 11,3 | 47 | 385 | 825 | 33,1 |
| | 16,14 | 31,6 | 21,3 | 10,3 | 35 | 269 | 760 | 25,4 |
| Comp "S" | 9.00 | 21,6 | 16,4 | 5,2 | 4 | 26 | 700 | 9 |
| | 11.00 | 26 | 17,5 | 8,5 | 10 | 74 | 720 | 16 |
| | 11.40 | 34,4 | 19,3 | 15,1 | 17 | 128 | 750 | 15,5 |
| | 12.25 | 38,8 | 20 | 18,8 | 19 | 160 | 830 | 15,6 |
| | 13.00 | 36,2 | 19,7 | 16,5 | 25 | 140 | 570 | 15,6 |
| | 13.30 | 43 | 22,4 | 20,6 | 22 | 175 | 800 | 15,6 |
| | 14.35 | 43 | 22,4 | 20,6 | 21 | 176 | 825 | 15,7 |
| | 16.14 | 37,1 | 21,3 | 15,8 | 18 | 139 | 760 | 16,1 |

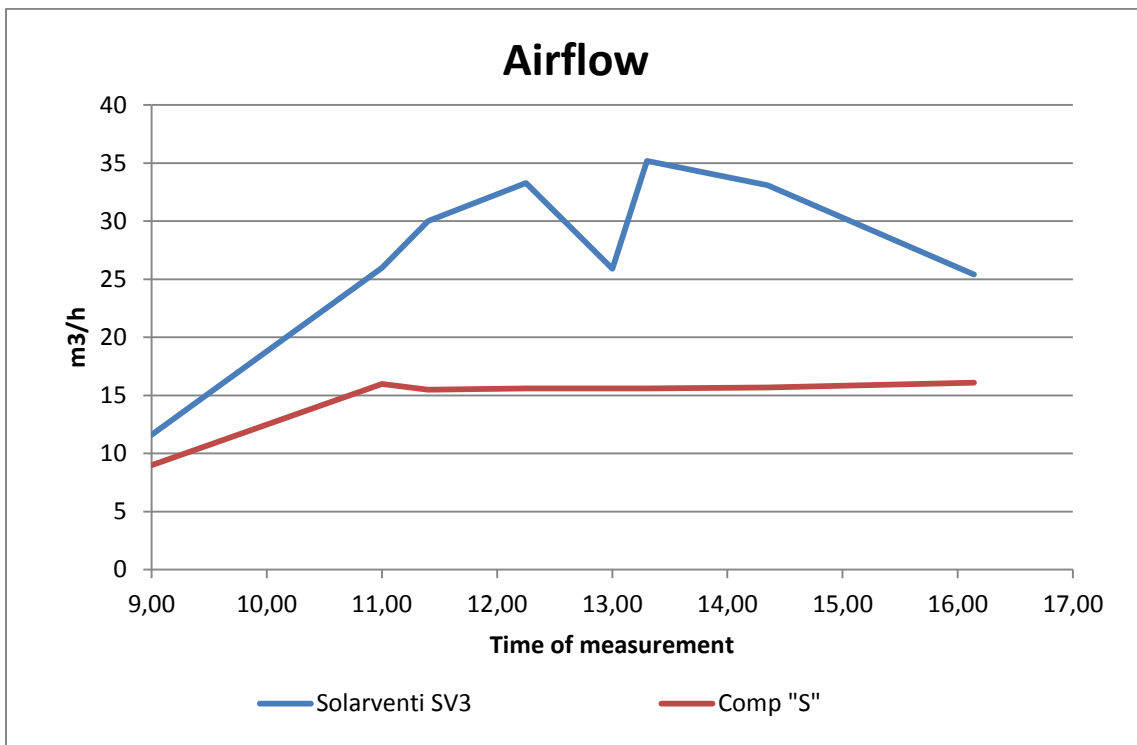
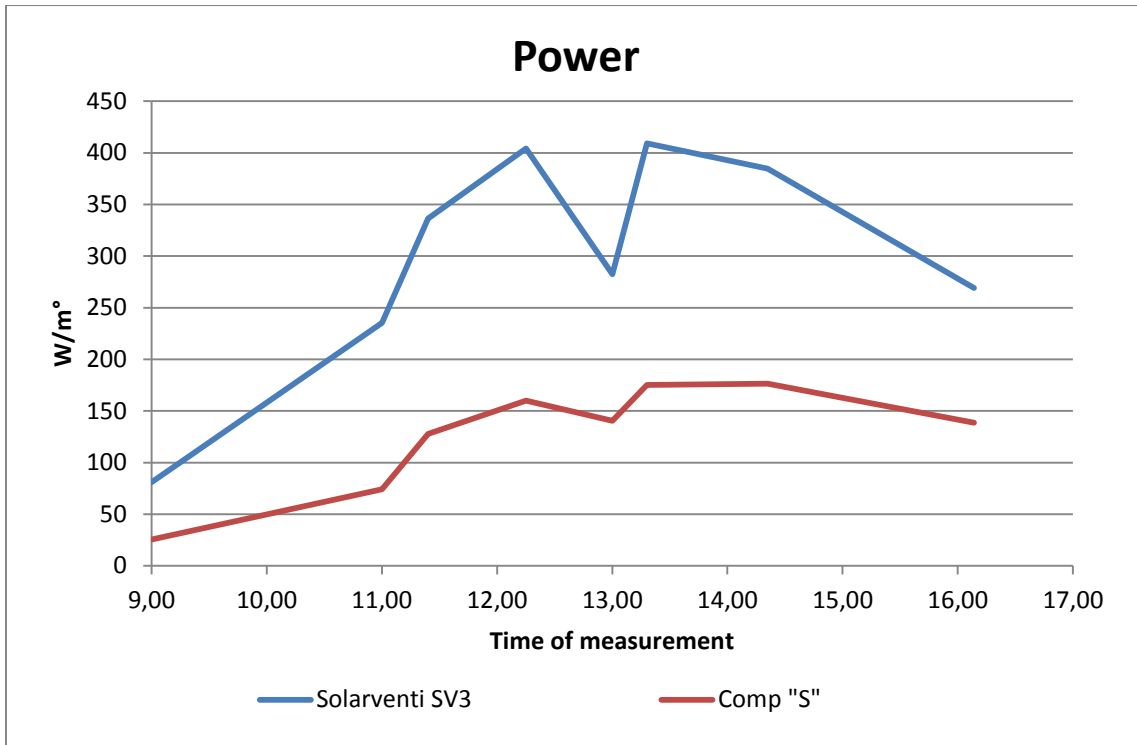
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