

Performance Review Report

Solar Air Heater

Manufactured by Oscar Science & Technology Co., Ltd.



The solar panels are mounted according to manufacturer specifications, facing south. The panels are set to produce the highest possible ventilation from fresh air. Weather: Sunny 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.

Test method:

- 1 Record the radiation data
- 2 Record the air volume at the outlet
- 3 Record the start air temperature

Measuring tool: Germany TESTO 100mm Air speed meter

High-precision mercury thermometer (digital thermometer although the display deviation of 0.1 ° C, in fact, more than 1,2°C, the accuracy is poor)

The uncertainties of the measurements are as follows:

Temperature ± 0.5 °C; Air flow ± 2 m³/h; Power ± 20 W

Objectives:

To test the efficiency and power of different models

To compare the performance of each model

Air density 0,00129 Kg/L

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

Humidity:55%

Test date: February 5, 2018

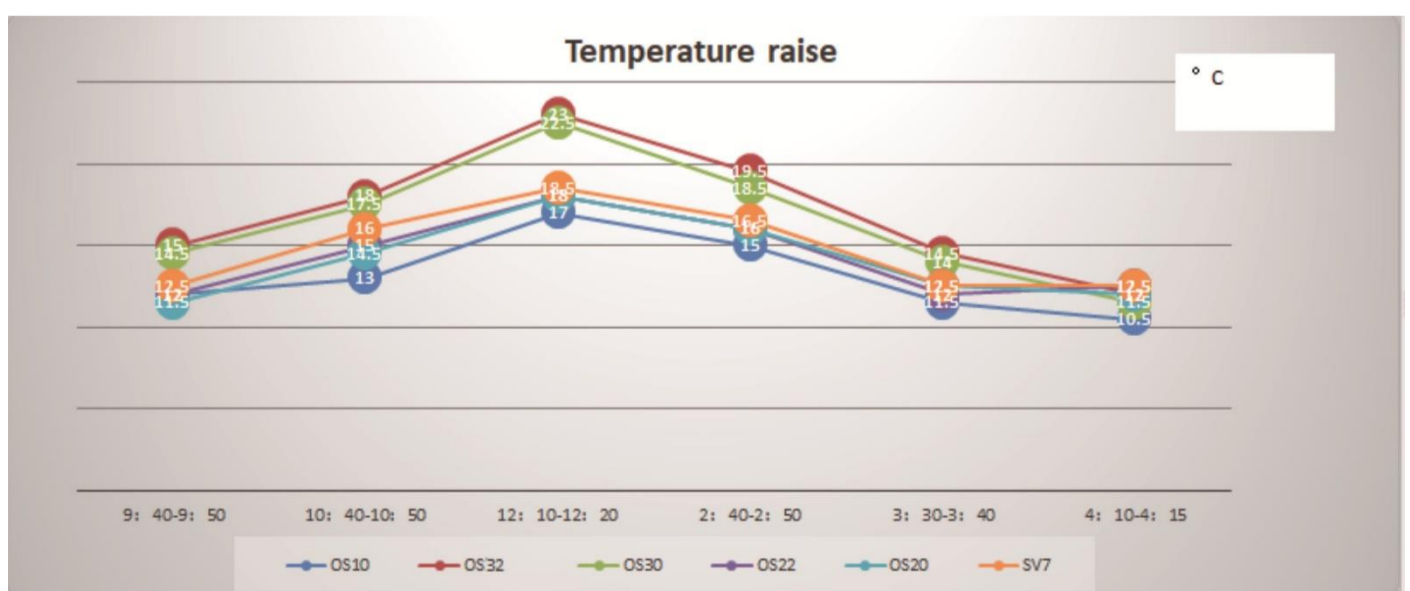


Products tested (Fresh air inlet of solar air heater standard PET film) :

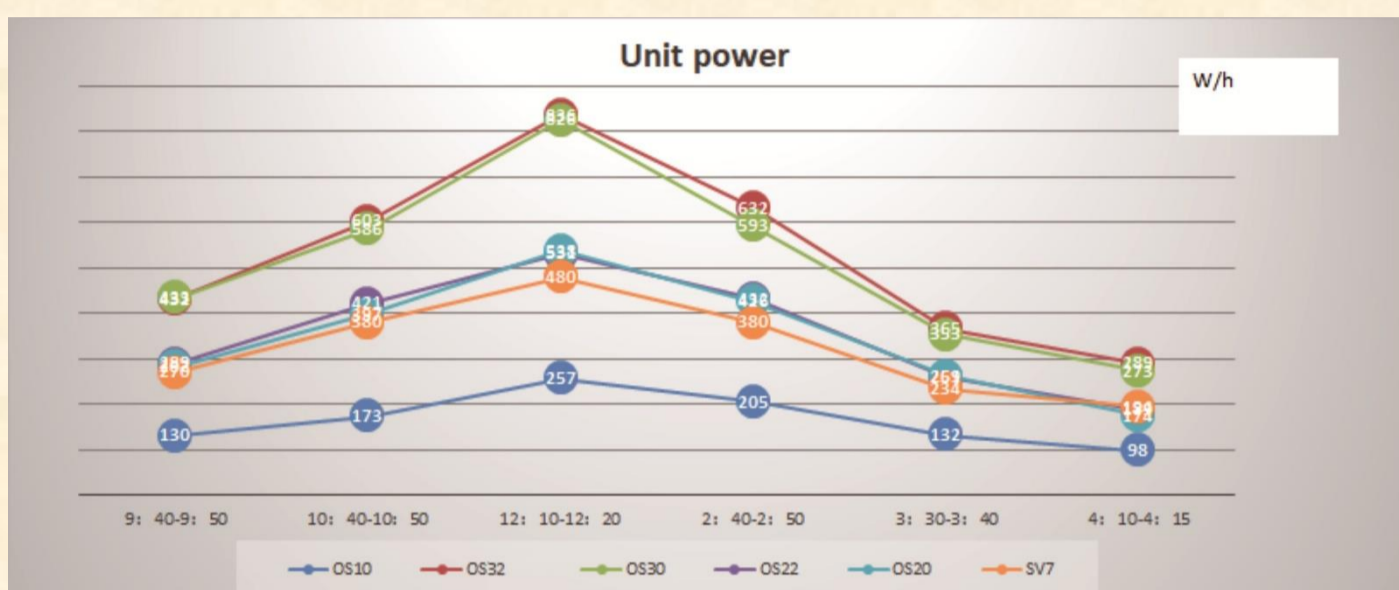
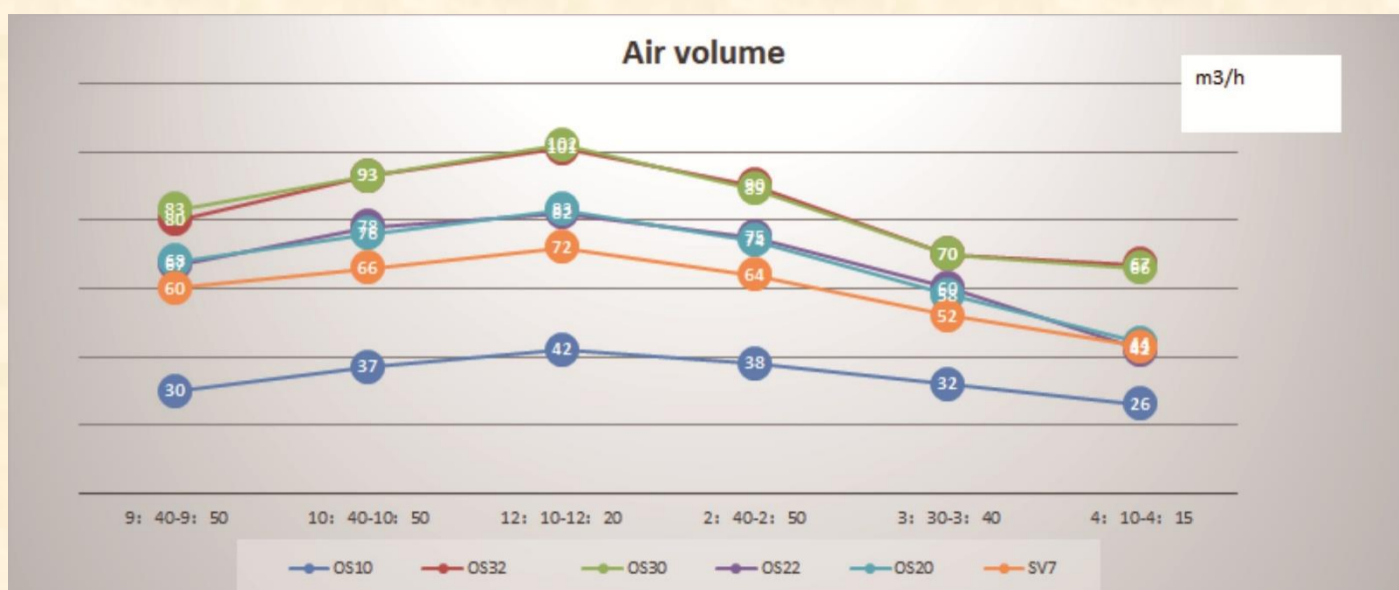
Panel	Width (cm)	Height(cm)	Thick(cm)	Effective area (m ²)	Weight (kg)	Fan (mm)
OS10	52	71	6.2	0.37	6	ADDA 92*92*25
OS32	92	121	6.2	1.11	25	SUNON120*120*25
OS30	92	121	6.2	1.11	25	SUNON120*120*25
OS22	72	100	6.2	0.72	13.5	SUNON120*120*25
OS20	72	100	6.2	0.72	13.5	SUNON120*120*25
SV7 (After one year of use)	70	100	5.5	0.7	8	SUNON120*120*25

COMPARISON TEST REPORT

Model	Start air temperature	heated temperature	Temperature raise	Air volume	Illumination Effective area	Unit power	Power
	°C	°C	°C	m ³ /h	m ²	W/h/m ²	W/h
Measurement 1. 9:40-9:50							
OS10	5	17	12	30	0.37	130	350
OS32	5	20	15	80	1.11	432	389
OS30	5	19.5	14.5	83	1.11	433	390
OS22	5	17	12	67	0.72	289	402
OS20	5	16.5	11.5	68	0.72	282	391
SV7	5	17.5	12.5	60	0.7	270	386
Measurement 2. 10:40-10:50							
OS10	10	23	13	37	0.37	173	468
OS32	10	28	18	93	1.11	603	543
OS30	10	27.5	17.5	93	1.11	586	528
OS22	10	25	15	78	0.72	421	585
OS20	10	24.5	14.5	76	0.72	397	551
SV7	10	26	16	66	0.7	380	543
Measurement 3 12:10-12:20							
OS10	14.5	31.5	17	42	0.37	257	695
OS32	14.5	37.5	23	101	1.11	836	753
OS30	14.5	37	22.5	102	1.11	826	744
OS22	14.5	32.5	18	82	0.72	531	738
OS20	14.5	32.5	18	83	0.72	538	747
SV7	14.5	33	18.5	72	0.7	480	685
Measurement 4. 2: 40-2:50							
OS10	16	31	15	38	0.37	205	555
OS32	16	34.5	19.5	90	1.11	632	569
OS30	16	33.5	18.5	89	1.11	593	534
OS22	16	32	16	75	0.72	432	600
OS20	16	32	16	74	0.72	426	592
SV7	16	32.5	16.5	64	0.7	380	543
Measurement 5. 3: 30-3:40							
OS10	12	23.5	11.5	32	0.37	132	358
OS32	12	26.5	14.5	70	1.11	365	329
OS30	12	26	14	70	1.11	353	318
OS22	12	24	12	60	0.72	259	360
OS20	12	24.5	12.5	58	0.72	261	363
SV7	12	24.5	12.5	52	0.7	234	334
Measurement 6. 4: 10-4:15							
OS10	8	18.5	10.5	26	0.37	98	266
OS32	8	20	12	67	1.11	289	261
OS30	8	19.5	11.5	66	1.11	273	246
OS22	8	20.5	12.5	42	0.72	189	263
OS20	8	20	12	44	0.72	174	242
SV7	8	20.5	12.5	43	0.7	194	276



OSCAR solar air collectors always provide you with a warm and healthy home!



Test video for OS10 VS OS32 VS OS30 VS OS 22 VS OS20 VS SV7 made in 2018:

<https://youtu.be/E1ru1enuEnQ>

Transmittance test video: Super Clear solar Glass VS ordinary glass VS Polycarbonate

<https://youtu.be/JuvBciaMm9Q>

Air volume test video: OS20(old style)vsOS20vsSV (Other company)

https://youtu.be/4CHWEPA_n_FY

786w Solar radiation test video :OS20(old style) vs OS20 vs SV (other company):

<https://youtu.be/CWACLJxcqEE>

720w Solar radiation solar air heater test video: OS30

https://youtu.be/ZsP_DHTRPTE

928w Solar radiation solar air heater test video: OS20(old style) vs OS20 vs SV (other company): <https://youtu.be/9ywVEOI-Kco>



OSCAR solar air collectors always provide you with a warm and healthy home!
Avoid humidity; Avoid stale smell; Avoid mould and fungus.

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