



SUMMARY DISTILLATION CAPACITY

Created: 22 February 2007

This estimation is based on an energy flow model.

The end values have an uncertainty of +/- 20%.

More accurate values will be obtained by a computer simulation model, using advanced computational fluid dynamics (CFD).

Estimated daily distillation capacity in L pure water / square meter nett floor area / day

Given values are for the latitude of Adelaide (35°S). Typically, increase the distillation rates by 0.44% when latitude is 1° closer to the equator.

ESTIMATED DISTILLATION RATE PER DAY - LOCATION AT THE LATITUDE OF ADELAIDE (35°S) L/m²/day

	Max. ambient outside air temperature °C	Solar radiation MJ/m ² /day	Model without solar tracker Renvastill RV-20L					
			Stand-alone	With 4kW solar pond	With 2kW wind turbine	With 2kW wind turbine and 4kW solar pond	With 4kW wind turbine	With 4kW wind turbine and 4kW solar pond
Winter solstice, overcast sky	11	9	12.9	22.8	43.4	55.5	73.9	88.1
Winter solstice, clear sky	16	13	19.4	30.0	50.9	63.7	82.5	97.5
Spring equinox, overcast sky	20	17	26.0	37.3	58.4	72.0	90.9	106.7
Spring equinox, clear sky	25	22	34.8	47.0	68.4	82.9	101.9	118.7
Summer solstice, overcast sky	29	23	37.4	50.0	71.8	86.8	106.3	123.5
Summer solstice, clear sky	34	31	52.1	65.9	87.7	103.9	123.3	141.9
Midsummer peak level	38	36	62.1	76.8	98.6	115.7	135.1	154.6
Autumn equinox, overcast sky	19	16	24.3	35.5	56.5	69.9	88.7	104.4
Autumn equinox, clear sky	24	21	33.0	45.0	66.3	80.6	99.7	116.2
Annual average	23	20	31	43	64	78	97	113

	Max. ambient outside air temperature °C	Solar radiation MJ/m ² /day	Model with solar tracker Renvastill RV-20T					
			Stand-alone	With 4kW solar pond	With 2kW wind turbine	With 2kW wind turbine and 4kW solar pond	With 4kW wind turbine	With 4kW wind turbine and 4kW solar pond
Winter solstice, overcast sky	11	9	13.1	23.0	43.6	55.7	74.1	88.3
Winter solstice, clear sky	16	13	20.3	31.0	51.9	64.8	83.4	98.6
Spring equinox, overcast sky	20	17	27.1	38.5	59.5	73.1	91.9	107.8
Spring equinox, clear sky	25	22	38.4	50.8	71.9	86.6	105.5	122.5
Summer solstice, overcast sky	29	23	40.0	52.8	74.5	89.6	109.0	126.4
Summer solstice, clear sky	34	31	60.0	74.4	95.6	112.4	131.2	150.3
Midsummer peak level	38	36	72.1	87.5	108.7	126.5	145.2	165.4
Autumn equinox, overcast sky	19	16	25.3	36.5	57.5	71.0	89.7	105.4
Autumn equinox, clear sky	24	21	36.4	48.6	69.7	84.2	103.0	119.8
Annual average	23	20	34	46	67	81	100	116

