

Siemens SWT-3.3-130 3300 130.0 !O!

File C:\Users\Kuczynski\Documents\WindPRO Data\WTG Data\Siemens SWT-3.3-130 3300 130.0 !O!.wtg

Company Siemens IEC IIA.
 Type/Version SWT-3.3-130
 Rated power 3 300,0 kW
 Secondary generator 0,0 kW
 Rotor diameter 130,0 m
 Tower Tubular
 Grid connection 50 Hz

Origin country DK
 Blade type B63
 Generator type Variable
 Rpm, rated power 0,0 rpm
 Rpm, initial 0,0 rpm
 Hub height(s) 85,0; 110,0; 120,0; 135,0 m
 Maximum blade width 3,50 m
 Blade width for 90% radius 0,80 m
 Valid Yes
 Creator EMD
 Created 2014-12-17 10:39
 Edited 2014-12-17 10:39

Power curve: Level 0 - Calculated - Std. 106dB - 10-2014

Source Manufacturer

Source date	Creator	Created	Edited	Default	Stop windSpeed	Air density	Tip angle	Power control	CT curve type
					[m/s]	[kg/m3]	[°]		
2014-10-27 00:00	EMD	2014-12-17 10:39	2014-12-17 10:40	Yes	25,0	1,225	0,0	Pitch	User defined

Power Curve Rev. 0.

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Power curve

Wind speed [m/s]	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00	11,00	12,00	13,00	14,00	15,00	16,00	17,00	18,00
Power [kW]	0	42	180	412	760	1 241	1 864	2 588	3 122	3 278	3 298	3 300	3 300	3 300	3 300	3 300	3 300
Ce	0,000	0,191	0,346	0,405	0,433	0,445	0,448	0,437	0,384	0,303	0,235	0,185	0,148	0,120	0,099	0,083	0,070

Wind speed [m/s]	19,00	20,00	21,00	22,00	23,00	24,00	25,00
Power [kW]	3 300	3 300	3 300	3 300	3 300	3 300	3 300
Ce	0,059	0,051	0,044	0,038	0,033	0,029	0,026

Ct curve

Wind speed [m/s]	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00	11,00	12,00	13,00	14,00	15,00	16,00	17,00	18,00
Ct	0,000	0,775	0,787	0,819	0,823	0,829	0,837	0,806	0,717	0,537	0,382	0,290	0,227	0,183	0,150	0,125	0,105

Wind speed [m/s]	19,00	20,00	21,00	22,00	23,00	24,00	25,00
Ct	0,090	0,077	0,067	0,059	0,052	0,046	0,042

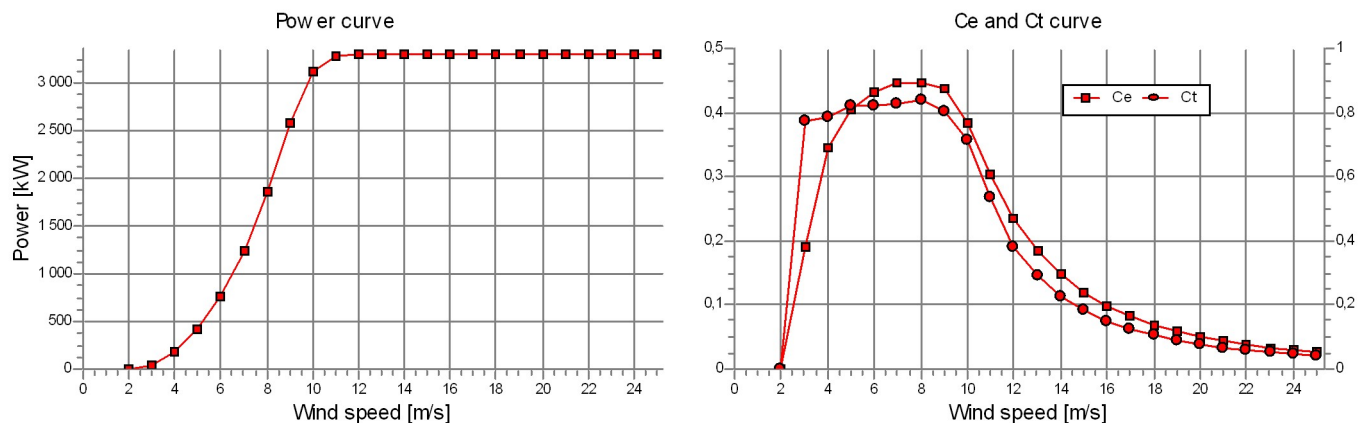
HP curve comparison

Vmean	[m/s]	5	6	7	8	9	10
HP value	[MWh]	6 485	9 579	12 444	14 911	16 940	18 528
Level 0 - Calculated - Std. 106dB - 10-2014	[MWh]	6 452	9 534	12 393	14 857	16 876	18 442
Check value	[%]	1	0	0	0	0	0

The table shows comparison between annual energy production calculated on basis of simplified "HP-curves" which assume that all WTGs performs quite similar - only specific power loading (kW/m²) and single/dual speed or stall/pitch decides the calculated values. Productions are without wake losses.
 For further details, ask at the Danish Energy Agency for project report J.nr. 51171/00-0016 or see WindPRO manual chapter 3.5.2.
 The method is refined in EMD report "20 Detailed Case Studies comparing Project Design Calculations and actual Energy Productions for Wind Energy Projects worldwide", Jan 2003.
 Use the table to evaluate if the given power curve is reasonable - if the check value are lower than -5%, the power curve probably is too optimistic due to uncertainty in power curve measurement.
 Updated in WindPRO 2.8, Feb. 2012, see details in manual!

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Noise: Level 0 - Calculated - Std. 106dB - 10-2014

Source Manufacturer

Source date	Creator	Created	Edited	Default
2014-10-28 00:00	EMD	2014-12-17 10:41	2014-12-17 10:43	No

Hub height [m]	Wind speed [m/s]	Lwa,ref [dB(A)]	Wind speed dependency [dB(A)/m/s]	Pure tones	Octave data								A weighted	
					63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]		
85,0	3,0	91,9		1,0	No									
	4,0	96,1		1,0	No									
	5,0	101,0		1,0	No									
	6,0	105,2		1,0	No	85,4	93,5	98,1	100,2	99,3	94,9	91,6	82,4	Yes
	7,0	106,0		1,0	No									
	8,0	106,0		1,0	No	86,6	94,3	96,3	100,4	101,6	97,2	92,4	82,9	Yes
	9,0	106,0		1,0	No									
	10,0	106,0		1,0	No									
	11,0	106,0		1,0	No									
	12,0	106,0		1,0	No									
110,0	3,0	92,4		1,0	No									
	4,0	96,7		1,0	No									
	5,0	101,9		1,0	No									
	6,0	105,6		1,0	No	85,8	93,9	98,5	100,6	99,7	95,3	92,0	82,8	Yes
	7,0	106,0		1,0	No									
	8,0	106,0		1,0	No	86,6	94,3	96,3	100,4	101,6	97,2	92,4	82,9	Yes
	9,0	106,0		1,0	No									
	10,0	106,0		1,0	No									
	11,0	106,0		1,0	No									
	12,0	106,0		1,0	No									
120,0	3,0	92,5		1,0	No									
	4,0	96,9		1,0	No									
	5,0	102,2		1,0	No									
	6,0	105,7		1,0	No	86,0	94,0	98,6	100,7	99,8	95,4	92,1	82,9	Yes
	7,0	106,0		1,0	No									
	8,0	106,0		1,0	No	86,6	94,3	96,3	100,4	101,6	97,2	92,4	82,9	Yes
	9,0	106,0		1,0	No									
	10,0	106,0		1,0	No									
	11,0	106,0		1,0	No									
	12,0	106,0		1,0	No									
135,0	3,0	92,7		1,0	No									
	4,0	97,2		1,0	No									
	5,0	102,6		1,0	No									
	6,0	105,9		1,0	No	86,2	94,2	98,8	100,9	100,0	95,6	92,3	83,1	Yes
	7,0	106,0		1,0	No									
	8,0	106,0		1,0	No	86,6	94,3	96,3	100,4	101,6	97,2	92,4	82,9	Yes
	9,0	106,0		1,0	No									
	10,0	106,0		1,0	No									
	11,0	106,0		1,0	No									
	12,0	106,0		1,0	No									

Noise Curve Rev. 0.

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Visual data

Name Visual SWT 3.3-130
Source SIEMENS

Source date	Creator	Created	Edited	Default
2014-10-15 00:00	EMD	2001-03-01 10:15	2015-01-22 10:36	No

Tower

Cabin

Distance cabin front (rotor) to tower center: 60 %

Shape	Height front [m]	Height back [m]	Width front [m]	Width back [m]	Length bottom [m]	Length top [m]	Front offset [m]	Rear offset [m]
Box	6,30	6,10	3,00	3,00	0,33	0,33	0,65	0,55
Box	4,15	6,30	3,00	3,00	0,50	0,50	-0,40	0,65
Cylinder	4,15	4,15	4,15	4,15	5,50	5,50	0,00	-0,40

Rotor and hub

Distance cabin front (rotor) to tower center: 60 %

Number of blades	3
Blade position (center to cabin)	1,20 m
Chord max	3,40 m
Rotor position relative to tower	Up wind
Hub length (cabin to spinner tip)	3,00 m
Spinner length (0 = no spinner)	0,30 m
Hub diameter (2xradius from hub center to blade root)	2,00 m
Spinner max diameter	4,00 m
Shaft radius	4,15 m
Hub tilt angle	6,0 °
Blade cone angle	3,0 °

