

Sound Power Level of the ENERCON E-101 Reduced Modes (Data Sheet)

Imprint

Publisher: ENERCON GmbH ▪ Dreekamp 5 ▪ 26605 Aurich ▪ Germany
 Phone: +49 4941 927-0
 Fax: +49 4941 927-109

Copyright: © ENERCON GmbH. Any reproduction, distribution and utilisation of this document as well as the communication of its contents to third parties without express authorisation is prohibited. Violators will be held liable for monetary damages. All rights reserved in the event of the grant of a patent, utility model or design.

Content subject to change: ENERCON GmbH reserves the right to change, improve and expand this document and the subject matter described herein at any time without prior notice.

Revision

Revision: 1.2
 Department: ENERCON GmbH / Site Assessment

Glossary

WEC means an ENERCON wind energy converter.
 WECs means more than one ENERCON wind energy converter.

Document information:		© Copyright ENERCON GmbH. All rights reserved.	
Author/Revisor/ date:	Sr / 02.2013	Documentname	SIAS-04-SPL E-101 Red Rev1_2-eng-eng.doc
Approved / date:	RWo / 02.2013	Revision /date	1.2
Translation /date:			

Sound Power Levels for the E-101 with reduced rated power

Sound Power Levels for the E-101 with reduced rated power						
	$P_{N,red}=2500 \text{ kW}$ $n_{N,red}=\text{=}$	$P_{N,red}=2000 \text{ kW}$ $n_{N,red}=\text{=}$	$P_{N,red}=1500 \text{ kW}$ $n_{N,red}=\text{=}$	$P_{N,red}=1000 \text{ kW}$ $n_{N,red}=\text{=}$	$P_{N,red}=800 \text{ kW}$ $n_{N,red}=\text{=}$	$P_{N,red}=600 \text{ kW}$ $n_{N,red}=\text{=}$
95% rated power	105.6 dB(A)	104.0 dB(A)	102.0 dB(A)	100.0 dB(A)	99.0 dB(A)	95.0 dB(A)

1. The respective SPL is given for 95% $P_{N,red}$ and is therefore valid for all hub heights.
2. A tonal audibility of $\Delta L_{a,k} < 2 \text{ dB}$ can be expected over the whole operational range (valid in the near vicinity of the turbine according to IEC 61 400 -11 ed. 2).
3. The sound power level values given in the table are valid for the respective reduced Modes (defined via the reduced rated power $P_{N,red}$ and the reduced rated rotational speed $n_{N,red}$).
4. The power curves for the respective reduced modes are given in a separate document which can be made available upon request.
5. Due to the typical measurement uncertainties, if the sound power level is measured according to one of the accepted methods the measured values can differ from the values shown in this document in the range of +/- 1 dB.

Accepted measurement methods are:

- a) IEC 61400-11 ed. 2 („Wind turbine generator systems – Part 11: Acoustic noise measurement techniques; Second edition“), and
- b) the FGW-Guidelines („Technische Richtlinie für Windenergieanlagen – Teil 1: Bestimmung der Schallemissionswerte“, published by the association “Fördergesellschaft für Windenergie e.V.“, 18th revision).

If the difference between total noise and background noise during a measurement is less than 6 dB a higher uncertainty must be considered.

6. Sound Power values for further reduced modes can be provided upon request.
7. The sound power level of a wind turbine depends on several factors such as but not limited to regular maintenance and day-to-day operation in compliance with the manufacturer’s operating instructions. Therefore, this data sheet can not, and is not intended to, constitute an express or implied warranty towards the customer that the E-101 WEC will meet the exact sound power level values as shown in this document at any project specific site.

Document information:	© Copyright ENERCON GmbH. All rights reserved.		
Author/Revisor/ date:	Sr / 02.2013	Documentname	SIAS-04-SPL E-101 Red Rev1_2-eng-eng.doc
Approved / date:	RWo / 02.2013	Revision /date	1.2
Translation /date:			