


E0004269934 Rev. 0 / 2017-08-29	Third octave sound power levels - unweighted - Nordex N149/4.0-4.5 STE - Operational Modes	
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2.15 Sound optimized mode - Mode 14


2.15.1 Hub height 105 m

	Third octave sound power levels at standardized wind speeds v_s in dB(LIN) - unweighted									
Frequency	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s	11 m/s	12 m/s
20 Hz	101.8	102.8	104.8	104.8	105.1	105.1	105.1	105.1	105.1	105.1
25 Hz	100.7	101.7	103.6	103.6	103.5	103.5	103.5	103.5	103.5	103.5
31.5 Hz	99.2	100.2	102.5	102.5	103.3	103.3	103.3	103.3	103.3	103.3
40 Hz	100.4	101.4	102.2	102.2	102.3	102.3	102.3	102.3	102.3	102.3
50 Hz	97.3	98.3	101.2	101.2	103.1	103.1	103.1	103.1	103.1	103.1
63 Hz	98.1	99.1	99.7	99.7	100.3	100.3	100.3	100.3	100.3	100.3
80 Hz	97.3	98.3	99.5	99.5	99.3	99.3	99.3	99.3	99.3	99.3
100 Hz	95.0	96.0	98.3	98.3	100.7	100.7	100.7	100.7	100.7	100.7
125 Hz	94.3	95.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3	96.3
160 Hz	94.6	95.6	96.4	96.4	94.7	94.7	94.7	94.7	94.7	94.7
200 Hz	91.3	92.3	94.0	94.0	93.6	93.6	93.6	93.6	93.6	93.6
250 Hz	90.4	91.4	93.3	93.3	92.3	92.3	92.3	92.3	92.3	92.3
315 Hz	89.6	90.6	92.9	92.9	93.5	93.5	93.5	93.5	93.5	93.5
400 Hz	88.1	89.1	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3
500 Hz	85.4	86.4	89.5	89.5	90.0	90.0	90.0	90.0	90.0	90.0
630 Hz	85.1	86.1	89.8	89.8	90.6	90.6	90.6	90.6	90.6	90.6
800 Hz	83.4	84.4	88.2	88.2	88.6	88.6	88.6	88.6	88.6	88.6
1000 Hz	83.9	84.9	88.8	88.8	88.6	88.6	88.6	88.6	88.6	88.6
1250 Hz	82.9	83.9	87.8	87.8	87.3	87.3	87.3	87.3	87.3	87.3
1600 Hz	82.0	83.0	87.1	87.1	85.9	85.9	85.9	85.9	85.9	85.9
2000 Hz	80.3	81.3	85.2	85.2	84.5	84.5	84.5	84.5	84.5	84.5
2500 Hz	77.9	78.9	82.7	82.7	82.5	82.5	82.5	82.5	82.5	82.5
3150 Hz	75.8	76.8	78.6	78.6	79.8	79.8	79.8	79.8	79.8	79.8
4000 Hz	75.9	76.9	74.0	74.0	76.0	76.0	76.0	76.0	76.0	76.0
5000 Hz	71.7	72.7	72.0	72.0	71.7	71.7	71.7	71.7	71.7	71.7
6300 Hz	68.7	69.7	71.0	71.0	72.1	72.1	72.1	72.1	72.1	72.1
8000 Hz	67.8	68.8	69.9	69.9	71.2	71.2	71.2	71.2	71.2	71.2
10000 Hz	65.3	66.3	67.5	67.5	68.4	68.4	68.4	68.4	68.4	68.4
Total SPL unweighted dB(LIN)	108.9	109.9	111.7	111.7	112.2	112.2	112.2	112.2	112.2	112.2
Total SPL A-weighted dB(A)	94.0	95.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0

2.16 Sound optimized mode - Mode 15

2.16.1 Hub height 105 m

Frequency	Third octave sound power levels at standardized wind speeds v_s in dB(LIN) - unweighted									
	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s	11 m/s	12 m/s
20 Hz	101.8	102.8	104.3	104.3	104.6	104.6	104.6	104.6	104.6	104.6
25 Hz	100.7	101.7	103.1	103.1	103.0	103.0	103.0	103.0	103.0	103.0
31.5 Hz	99.2	100.2	102.0	102.0	102.8	102.8	102.8	102.8	102.8	102.8
40 Hz	100.4	101.4	101.7	101.7	101.8	101.8	101.8	101.8	101.8	101.8
50 Hz	97.3	98.3	100.7	100.7	102.6	102.6	102.6	102.6	102.6	102.6
63 Hz	98.1	99.1	99.2	99.2	99.8	99.8	99.8	99.8	99.8	99.8
80 Hz	97.3	98.3	99.0	99.0	98.8	98.8	98.8	98.8	98.8	98.8
100 Hz	95.0	96.0	97.8	97.8	100.2	100.2	100.2	100.2	100.2	100.2
125 Hz	94.3	95.3	95.8	95.8	95.8	95.8	95.8	95.8	95.8	95.8
160 Hz	94.6	95.6	95.9	95.9	94.2	94.2	94.2	94.2	94.2	94.2
200 Hz	91.3	92.3	93.5	93.5	93.1	93.1	93.1	93.1	93.1	93.1
250 Hz	90.4	91.4	92.8	92.8	91.8	91.8	91.8	91.8	91.8	91.8
315 Hz	89.6	90.6	92.4	92.4	93.0	93.0	93.0	93.0	93.0	93.0
400 Hz	88.1	89.1	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8
500 Hz	85.4	86.4	89.0	89.0	89.5	89.5	89.5	89.5	89.5	89.5
630 Hz	85.1	86.1	89.3	89.3	90.1	90.1	90.1	90.1	90.1	90.1
800 Hz	83.4	84.4	87.7	87.7	88.1	88.1	88.1	88.1	88.1	88.1
1000 Hz	83.9	84.9	88.3	88.3	88.1	88.1	88.1	88.1	88.1	88.1
1250 Hz	82.9	83.9	87.3	87.3	86.8	86.8	86.8	86.8	86.8	86.8
1600 Hz	82.0	83.0	86.6	86.6	85.4	85.4	85.4	85.4	85.4	85.4
2000 Hz	80.3	81.3	84.7	84.7	84.0	84.0	84.0	84.0	84.0	84.0
2500 Hz	77.9	78.9	82.2	82.2	82.0	82.0	82.0	82.0	82.0	82.0
3150 Hz	75.8	76.8	78.1	78.1	79.3	79.3	79.3	79.3	79.3	79.3
4000 Hz	75.9	76.9	73.5	73.5	75.5	75.5	75.5	75.5	75.5	75.5
5000 Hz	71.7	72.7	71.5	71.5	71.2	71.2	71.2	71.2	71.2	71.2
6300 Hz	68.7	69.7	70.5	70.5	71.6	71.6	71.6	71.6	71.6	71.6
8000 Hz	67.8	68.8	69.4	69.4	70.7	70.7	70.7	70.7	70.7	70.7
10000 Hz	65.3	66.3	67.0	67.0	67.9	67.9	67.9	67.9	67.9	67.9
Total SPL unweighted dB(LIN)	108.9	109.9	111.2	111.2	111.7	111.7	111.7	111.7	111.7	111.7
Total SPL A-weighted dB(A)	94.0	95.0	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5

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2.17 Sound optimized mode - Mode 16

2.17.1 Hub height 105 m

Frequency	Third octave sound power levels at standardized wind speeds v_s in dB(LIN) - unweighted									
	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s	11 m/s	12 m/s
20 Hz	101.8	102.8	103.8	103.8	104.1	104.1	104.1	104.1	104.1	104.1
25 Hz	100.7	101.7	102.6	102.6	102.5	102.5	102.5	102.5	102.5	102.5
31.5 Hz	99.2	100.2	101.5	101.5	102.3	102.3	102.3	102.3	102.3	102.3
40 Hz	100.4	101.4	101.2	101.2	101.3	101.3	101.3	101.3	101.3	101.3
50 Hz	97.3	98.3	100.2	100.2	102.1	102.1	102.1	102.1	102.1	102.1
63 Hz	98.1	99.1	98.7	98.7	99.3	99.3	99.3	99.3	99.3	99.3
80 Hz	97.3	98.3	98.5	98.5	98.3	98.3	98.3	98.3	98.3	98.3
100 Hz	95.0	96.0	97.3	97.3	99.7	99.7	99.7	99.7	99.7	99.7
125 Hz	94.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3	95.3
160 Hz	94.6	95.6	95.4	95.4	93.7	93.7	93.7	93.7	93.7	93.7
200 Hz	91.3	92.3	93.0	93.0	92.6	92.6	92.6	92.6	92.6	92.6
250 Hz	90.4	91.4	92.3	92.3	91.3	91.3	91.3	91.3	91.3	91.3
315 Hz	89.6	90.6	91.9	91.9	92.5	92.5	92.5	92.5	92.5	92.5
400 Hz	88.1	89.1	90.3	90.3	90.3	90.3	90.3	90.3	90.3	90.3
500 Hz	85.4	86.4	88.5	88.5	89.0	89.0	89.0	89.0	89.0	89.0
630 Hz	85.1	86.1	88.8	88.8	89.6	89.6	89.6	89.6	89.6	89.6
800 Hz	83.4	84.4	87.2	87.2	87.6	87.6	87.6	87.6	87.6	87.6
1000 Hz	83.9	84.9	87.8	87.8	87.6	87.6	87.6	87.6	87.6	87.6
1250 Hz	82.9	83.9	86.8	86.8	86.3	86.3	86.3	86.3	86.3	86.3
1600 Hz	82.0	83.0	86.1	86.1	84.9	84.9	84.9	84.9	84.9	84.9
2000 Hz	80.3	81.3	84.2	84.2	83.5	83.5	83.5	83.5	83.5	83.5
2500 Hz	77.9	78.9	81.7	81.7	81.5	81.5	81.5	81.5	81.5	81.5
3150 Hz	75.8	76.8	77.6	77.6	78.8	78.8	78.8	78.8	78.8	78.8
4000 Hz	75.9	76.9	73.0	73.0	75.0	75.0	75.0	75.0	75.0	75.0
5000 Hz	71.7	72.7	71.0	71.0	70.7	70.7	70.7	70.7	70.7	70.7
6300 Hz	68.7	69.7	70.0	70.0	71.1	71.1	71.1	71.1	71.1	71.1
8000 Hz	67.8	68.8	68.9	68.9	70.2	70.2	70.2	70.2	70.2	70.2
10000 Hz	65.3	66.3	66.5	66.5	67.4	67.4	67.4	67.4	67.4	67.4
Total SPL unweighted dB(LIN)	108.9	109.9	110.7	110.7	111.2	111.2	111.2	111.2	111.2	111.2
Total SPL A-weighted dB(A)	94.0	95.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0

2.18 Sound optimized mode - Mode 17

2.18.1 Hub height 105 m

Frequency	Third octave sound power levels at standardized wind speeds v_s in dB(LIN) - unweighted									
	3 m/s	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s	11 m/s	12 m/s
20 Hz	101.8	102.8	103.3	103.3	103.6	103.6	103.6	103.6	103.6	103.6
25 Hz	100.7	101.7	102.1	102.1	102.0	102.0	102.0	102.0	102.0	102.0
31.5 Hz	99.2	100.2	101.0	101.0	101.8	101.8	101.8	101.8	101.8	101.8
40 Hz	100.4	101.4	100.7	100.7	100.8	100.8	100.8	100.8	100.8	100.8
50 Hz	97.3	98.3	99.7	99.7	101.6	101.6	101.6	101.6	101.6	101.6
63 Hz	98.1	99.1	98.2	98.2	98.8	98.8	98.8	98.8	98.8	98.8
80 Hz	97.3	98.3	98.0	98.0	97.8	97.8	97.8	97.8	97.8	97.8
100 Hz	95.0	96.0	96.8	96.8	99.2	99.2	99.2	99.2	99.2	99.2
125 Hz	94.3	95.3	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8
160 Hz	94.6	95.6	94.9	94.9	93.2	93.2	93.2	93.2	93.2	93.2
200 Hz	91.3	92.3	92.5	92.5	92.1	92.1	92.1	92.1	92.1	92.1
250 Hz	90.4	91.4	91.8	91.8	90.8	90.8	90.8	90.8	90.8	90.8
315 Hz	89.6	90.6	91.4	91.4	92.0	92.0	92.0	92.0	92.0	92.0
400 Hz	88.1	89.1	89.8	89.8	89.8	89.8	89.8	89.8	89.8	89.8
500 Hz	85.4	86.4	88.0	88.0	88.5	88.5	88.5	88.5	88.5	88.5
630 Hz	85.1	86.1	88.3	88.3	89.1	89.1	89.1	89.1	89.1	89.1
800 Hz	83.4	84.4	86.7	86.7	87.1	87.1	87.1	87.1	87.1	87.1
1000 Hz	83.9	84.9	87.3	87.3	87.1	87.1	87.1	87.1	87.1	87.1
1250 Hz	82.9	83.9	86.3	86.3	85.8	85.8	85.8	85.8	85.8	85.8
1600 Hz	82.0	83.0	85.6	85.6	84.4	84.4	84.4	84.4	84.4	84.4
2000 Hz	80.3	81.3	83.7	83.7	83.0	83.0	83.0	83.0	83.0	83.0
2500 Hz	77.9	78.9	81.2	81.2	81.0	81.0	81.0	81.0	81.0	81.0
3150 Hz	75.8	76.8	77.1	77.1	78.3	78.3	78.3	78.3	78.3	78.3
4000 Hz	75.9	76.9	72.5	72.5	74.5	74.5	74.5	74.5	74.5	74.5
5000 Hz	71.7	72.7	70.5	70.5	70.2	70.2	70.2	70.2	70.2	70.2
6300 Hz	68.7	69.7	69.5	69.5	70.6	70.6	70.6	70.6	70.6	70.6
8000 Hz	67.8	68.8	68.4	68.4	69.7	69.7	69.7	69.7	69.7	69.7
10000 Hz	65.3	66.3	66.0	66.0	66.9	66.9	66.9	66.9	66.9	66.9
Total SPL unweighted dB(LIN)	108.9	109.9	110.2	110.2	110.7	110.7	110.7	110.7	110.7	110.7
Total SPL A-weighted dB(A)	94.0	95.0	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5

Standard Acoustic Emission

Noise Level (LW): Values reported correspond to the average estimated Sound Power Level emitted by the WTG at hub height, called LW in TS IEC-61400-14. LW values are expressed in dB(A). To obtain LWd value, as defined in IEC-61400-14, it must be applied a 2 dB increase to LW.


dB(A): LW is expressed in decibels applying the "A" filter as required by IEC.

Noise generated at standard power operation mode LW is **107.8 dB(A)**.

Noise values included in the present document correspond to the wind turbine configuration equipped with noise reduction add-ons attached to the blade.

SG 4.5-145	
Wind Speed [m/s]	LW [dB(A)]
3	95.1
3.5	95.1
4	95.1
4.5	95.1
5	95.5
5.5	97.6
6	99.7
6.5	101.5
7	103.2
7.5	104.7
8	106.2
8.5	107.6
9	107.8
9.5	107.8
10	107.8
10.5	107.8
11	107.8
11.5	107.8
12	107.8
12.5	107.8
13	107.8
13.5	107.8
14	107.8
14.5	107.8
15	107.8

Noise values included in the present document correspond to the wind turbine configuration equipped with noise reduction add-ons attached to the blade.

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5 NOISE SPECTRA

Table 3 shows the noise curves for the SG 4.5-145 MW expressed as A-weighted sound power level in function of wind speed at hub height, for the standard, Flexible Rating and Noise Reduction System operation and application modes.


Wind Speed [m/s]	6	7	8	9	10	11	12	13	Up to cut-out
SG 4.5-145 Baseline AM0 @ 4.5MW	99.7	103.2	106.2	107.8	107.8	107.8	107.8	107.8	107.8
SG 4.5-145 AM+5 @ 5.0MW	99.7	103.2	106.2	109.0	109.3	109.3	109.3	109.3	109.3
SG 4.5-145 AM+4 @ 4.9MW	99.7	103.2	106.2	109.0	109.0	109.0	109.0	109.0	109.0
SG 4.5-145 AM+3 @ 4.8MW	99.7	103.2	106.2	108.7	108.7	108.7	108.7	108.7	108.7
SG 4.5-145 AM+2 @ 4.7MW	99.7	103.2	106.2	108.4	108.4	108.4	108.4	108.4	108.4
SG 4.5-145 AM+1 @ 4.6MW	99.7	103.2	106.2	108.1	108.1	108.1	108.1	108.1	108.1
SG 4.5-145 AM-1 @ 4.4MW	99.7	103.2	106.2	107.5	107.5	107.5	107.5	107.5	107.5
SG 4.5-145 AM-2 @ 4.3MW	99.7	103.2	106.2	107.2	107.2	107.2	107.2	107.2	107.2
SG 4.5-145 AM-3 @ 4.2MW	99.7	103.2	106.2	106.9	106.9	106.9	106.9	106.9	106.9
SG 4.5-145 AM-3 @ 4.1MW	99.7	103.2	106.2	106.6	106.6	106.6	106.6	106.6	106.6
SG 4.5-145 AM-3 @ 4.0MW	99.7	103.2	106.2	106.3	106.3	106.3	106.3	106.3	106.3
SG 4.5-145 NRS Mode N1	99.7	103.2	105.7	105.7	105.7	105.7	105.7	105.7	105.7
SG 4.5-145 NRS Mode N2	99.7	103.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2
SG 4.5-145 NRS Mode N3	99.7	103.2	103.7	103.7	103.7	103.7	103.7	103.7	103.7
SG 4.5-145 NRS Mode N4	99.7	102.7	102.7	102.7	102.7	102.7	102.7	102.7	102.7
SG 4.5-145 NRS Mode N5	99.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.7
SG 4.5-145 NRS Mode N6	99.7	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
SG 4.5-145 NRS Mode N7	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0
SG 4.5-145 NRS Mode N8	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0

Table 3 Noise curves for the SG 4.5-145 MW for the standard, Flexible Rating and Noise Reduction System operation and application modes (ref: *SG145spectra_4500KW_R03_17062018*).

Tables 4 to 11 show the 1/3 octave band noise spectra for the SG 4.5-145 MW expressed as A-weighted sound power level for a given frequency band, for the standard, Flexible Rating and Noise Reduction System operation and application modes, at different wind speeds at hub height.

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Central Frequency [Hz]	10	12.5	16	20	25	31.5	40	50	63	80	100
SG 4.5-145 Baseline AM0 @ 4.5MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM+5 @ 5.0MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM+4 @ 4.9MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM+3 @ 4.8MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM+2 @ 4.7MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM+1 @ 4.6MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM-1 @ 4.4MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM-2 @ 4.3MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM-3 @ 4.2MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM-3 @ 4.1MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 AM-3 @ 4.0MW	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 NRS Mode N1	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 NRS Mode N2	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 NRS Mode N3	41.5	47.2	52.9	58.3	62.9	67.6	71.8	76.4	80.7	83.2	85.1
SG 4.5-145 NRS Mode N4	41.5	47.2	52.9	58.3	62.9	67.5	71.7	76.3	80.5	83.0	84.8
SG 4.5-145 NRS Mode N5	41.5	47.2	52.9	58.2	62.8	67.4	71.5	76.0	80.1	82.5	84.2
SG 4.5-145 NRS Mode N6	41.5	47.2	52.8	58.1	62.6	67.1	71.1	75.4	79.4	81.6	83.1
SG 4.5-145 NRS Mode N7	41.5	47.2	52.8	58.1	62.5	67.0	70.9	75.2	79.1	81.1	82.6
SG 4.5-145 NRS Mode N8	41.5	47.2	52.8	58.0	62.4	66.8	70.7	74.9	78.7	80.6	81.9
Central Frequency [Hz]	125	160	200	250	315	400	500	630	800	1000	1250
SG 4.5-145 Baseline AM0 @ 4.5MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM+5 @ 5.0MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM+4 @ 4.9MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM+3 @ 4.8MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM+2 @ 4.7MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM+1 @ 4.6MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM-1 @ 4.4MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM-2 @ 4.3MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM-3 @ 4.2MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM-3 @ 4.1MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 AM-3 @ 4.0MW	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 NRS Mode N1	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 NRS Mode N2	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 NRS Mode N3	86.6	87.6	88.8	90.3	90.7	90.4	90.5	92.1	91.9	92.9	93.6
SG 4.5-145 NRS Mode N4	86.2	87.2	88.3	89.8	90.2	89.9	90.0	91.6	91.4	92.4	93.1
SG 4.5-145 NRS Mode N5	85.5	86.3	87.3	88.8	89.2	88.9	89.0	90.6	90.4	91.4	92.1
SG 4.5-145 NRS Mode N6	84.2	84.7	85.4	86.9	87.3	87.0	87.1	88.7	88.5	89.5	90.2
SG 4.5-145 NRS Mode N7	83.5	84.0	84.5	86.0	86.4	86.1	86.2	87.8	87.6	88.6	89.3
SG 4.5-145 NRS Mode N8	82.8	83.1	83.4	84.9	85.3	85.0	85.1	86.7	86.5	87.5	88.2

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Central Frequency [Hz]	1600	2000	2500	3150	4000	5000	6300	8000	10000
SG 4.5-145 Baseline AM0 @ 4.5MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM+5 @ 5.0MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM+4 @ 4.9MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM+3 @ 4.8MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM+2 @ 4.7MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM+1 @ 4.6MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM-1 @ 4.4MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM-2 @ 4.3MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM-3 @ 4.2MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM-3 @ 4.1MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 AM-3 @ 4.0MW	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 NRS Mode N1	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 NRS Mode N2	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 NRS Mode N3	93.5	92.4	91.0	88.8	85.7	81.4	76.2	70.4	65.8
SG 4.5-145 NRS Mode N4	93.0	91.9	90.5	88.3	85.2	80.9	75.7	69.9	65.3
SG 4.5-145 NRS Mode N5	92.0	90.9	89.5	87.3	84.2	79.9	74.7	68.9	64.3
SG 4.5-145 NRS Mode N6	90.1	89.0	87.6	85.4	82.3	78.0	72.8	67.0	62.4
SG 4.5-145 NRS Mode N7	89.2	88.1	86.7	84.5	81.4	77.1	71.9	66.1	61.5
SG 4.5-145 NRS Mode N8	88.1	87.0	85.6	83.4	80.3	76.0	70.8	65.0	60.4

Table 5 One-third octave band noise spectra of SG 4.5-145 @ 7 m/s
(ref: SG145spectra_4500KW_R03_17062018)