

2.7 Sound optimized mode - Mode 6

2.7.1 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 | 107.1 | 109.8 | 109.8 | 110.1 | 110.1 | 110.1 | 110.1 | 110.1 |
| 25 Hz | 100.7 | 101.7 | 105.9 | 108.6 | 108.6 | 108.5 | 108.5 | 108.5 | 108.5 | 108.5 |
| 31.5 Hz | 99.2 | 100.2 | 104.8 | 107.5 | 107.5 | 108.3 | 108.3 | 108.3 | 108.3 | 108.3 |
| 40 Hz | 100.4 | 101.4 | 104.5 | 107.2 | 107.2 | 107.3 | 107.3 | 107.3 | 107.3 | 107.3 |
| 50 Hz | 97.3 | 98.3 | 103.5 | 106.2 | 106.2 | 108.1 | 108.1 | 108.1 | 108.1 | 108.1 |
| 63 Hz | 98.1 | 99.1 | 102.0 | 104.7 | 104.7 | 105.3 | 105.3 | 105.3 | 105.3 | 105.3 |
| 80 Hz | 97.3 | 98.3 | 101.8 | 104.5 | 104.5 | 104.3 | 104.3 | 104.3 | 104.3 | 104.3 |
| 100 Hz | 95.0 | 96.0 | 100.6 | 103.3 | 103.3 | 105.7 | 105.7 | 105.7 | 105.7 | 105.7 |
| 125 Hz | 94.3 | 95.3 | 98.6 | 101.3 | 101.3 | 101.3 | 101.3 | 101.3 | 101.3 | 101.3 |
| 160 Hz | 94.6 | 95.6 | 98.7 | 101.4 | 101.4 | 99.7 | 99.7 | 99.7 | 99.7 | 99.7 |
| 200 Hz | 91.3 | 92.3 | 96.3 | 99.0 | 99.0 | 98.6 | 98.6 | 98.6 | 98.6 | 98.6 |
| 250 Hz | 90.4 | 91.4 | 95.6 | 98.3 | 98.3 | 97.3 | 97.3 | 97.3 | 97.3 | 97.3 |
| 315 Hz | 89.6 | 90.6 | 95.2 | 97.9 | 97.9 | 98.5 | 98.5 | 98.5 | 98.5 | 98.5 |
| 400 Hz | 88.1 | 89.1 | 93.6 | 96.3 | 96.3 | 96.3 | 96.3 | 96.3 | 96.3 | 96.3 |
| 500 Hz | 85.4 | 86.4 | 91.8 | 94.5 | 94.5 | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 |
| 630 Hz | 85.1 | 86.1 | 92.1 | 94.8 | 94.8 | 95.6 | 95.6 | 95.6 | 95.6 | 95.6 |
| 800 Hz | 83.4 | 84.4 | 90.5 | 93.2 | 93.2 | 93.6 | 93.6 | 93.6 | 93.6 | 93.6 |
| 1000 Hz | 83.9 | 84.9 | 91.1 | 93.8 | 93.8 | 93.6 | 93.6 | 93.6 | 93.6 | 93.6 |
| 1250 Hz | 82.9 | 83.9 | 90.1 | 92.8 | 92.8 | 92.3 | 92.3 | 92.3 | 92.3 | 92.3 |
| 1600 Hz | 82.0 | 83.0 | 89.4 | 92.1 | 92.1 | 90.9 | 90.9 | 90.9 | 90.9 | 90.9 |
| 2000 Hz | 80.3 | 81.3 | 87.5 | 90.2 | 90.2 | 89.5 | 89.5 | 89.5 | 89.5 | 89.5 |
| 2500 Hz | 77.9 | 78.9 | 85.0 | 87.7 | 87.7 | 87.5 | 87.5 | 87.5 | 87.5 | 87.5 |
| 3150 Hz | 75.8 | 76.8 | 80.9 | 83.6 | 83.6 | 84.8 | 84.8 | 84.8 | 84.8 | 84.8 |
| 4000 Hz | 75.9 | 76.9 | 76.3 | 79.0 | 79.0 | 81.0 | 81.0 | 81.0 | 81.0 | 81.0 |
| 5000 Hz | 71.7 | 72.7 | 74.3 | 77.0 | 77.0 | 76.7 | 76.7 | 76.7 | 76.7 | 76.7 |
| 6300 Hz | 68.7 | 69.7 | 73.3 | 76.0 | 76.0 | 77.1 | 77.1 | 77.1 | 77.1 | 77.1 |
| 8000 Hz | 67.8 | 68.8 | 72.2 | 74.9 | 74.9 | 76.2 | 76.2 | 76.2 | 76.2 | 76.2 |
| 10000 Hz | 65.3 | 66.3 | 69.8 | 72.5 | 72.5 | 73.4 | 73.4 | 73.4 | 73.4 | 73.4 |
| Total SPL unweighted dB(LIN) | 108.9 | 109.9 | 114.0 | 116.7 | 116.7 | 117.2 | 117.2 | 117.2 | 117.2 | 117.2 |
| Total SPL A-weighted dB(A) | 94.0 | 95.0 | 100.3 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 | 103.0 |

2.7.2 Hub height 125 m

Not available

2.8 Sound optimized mode - Mode 7

2.8.1 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 | 107.1 | 109.3 | 109.3 | 109.6 | 109.6 | 109.6 | 109.6 | 109.6 |
| 25 Hz | 100.7 | 101.7 | 105.9 | 108.1 | 108.1 | 108.0 | 108.0 | 108.0 | 108.0 | 108.0 |
| 31.5 Hz | 99.2 | 100.2 | 104.8 | 107.0 | 107.0 | 107.8 | 107.8 | 107.8 | 107.8 | 107.8 |
| 40 Hz | 100.4 | 101.4 | 104.5 | 106.7 | 106.7 | 106.8 | 106.8 | 106.8 | 106.8 | 106.8 |
| 50 Hz | 97.3 | 98.3 | 103.5 | 105.7 | 105.7 | 107.6 | 107.6 | 107.6 | 107.6 | 107.6 |
| 63 Hz | 98.1 | 99.1 | 102.0 | 104.2 | 104.2 | 104.8 | 104.8 | 104.8 | 104.8 | 104.8 |
| 80 Hz | 97.3 | 98.3 | 101.8 | 104.0 | 104.0 | 103.8 | 103.8 | 103.8 | 103.8 | 103.8 |
| 100 Hz | 95.0 | 96.0 | 100.6 | 102.8 | 102.8 | 105.2 | 105.2 | 105.2 | 105.2 | 105.2 |
| 125 Hz | 94.3 | 95.3 | 98.6 | 100.8 | 100.8 | 100.8 | 100.8 | 100.8 | 100.8 | 100.8 |
| 160 Hz | 94.6 | 95.6 | 98.7 | 100.9 | 100.9 | 99.2 | 99.2 | 99.2 | 99.2 | 99.2 |
| 200 Hz | 91.3 | 92.3 | 96.3 | 98.5 | 98.5 | 98.1 | 98.1 | 98.1 | 98.1 | 98.1 |
| 250 Hz | 90.4 | 91.4 | 95.6 | 97.8 | 97.8 | 96.8 | 96.8 | 96.8 | 96.8 | 96.8 |
| 315 Hz | 89.6 | 90.6 | 95.2 | 97.4 | 97.4 | 98.0 | 98.0 | 98.0 | 98.0 | 98.0 |
| 400 Hz | 88.1 | 89.1 | 93.6 | 95.8 | 95.8 | 95.8 | 95.8 | 95.8 | 95.8 | 95.8 |
| 500 Hz | 85.4 | 86.4 | 91.8 | 94.0 | 94.0 | 94.5 | 94.5 | 94.5 | 94.5 | 94.5 |
| 630 Hz | 85.1 | 86.1 | 92.1 | 94.3 | 94.3 | 95.1 | 95.1 | 95.1 | 95.1 | 95.1 |
| 800 Hz | 83.4 | 84.4 | 90.5 | 92.7 | 92.7 | 93.1 | 93.1 | 93.1 | 93.1 | 93.1 |
| 1000 Hz | 83.9 | 84.9 | 91.1 | 93.3 | 93.3 | 93.1 | 93.1 | 93.1 | 93.1 | 93.1 |
| 1250 Hz | 82.9 | 83.9 | 90.1 | 92.3 | 92.3 | 91.8 | 91.8 | 91.8 | 91.8 | 91.8 |
| 1600 Hz | 82.0 | 83.0 | 89.4 | 91.6 | 91.6 | 90.4 | 90.4 | 90.4 | 90.4 | 90.4 |
| 2000 Hz | 80.3 | 81.3 | 87.5 | 89.7 | 89.7 | 89.0 | 89.0 | 89.0 | 89.0 | 89.0 |
| 2500 Hz | 77.9 | 78.9 | 85.0 | 87.2 | 87.2 | 87.0 | 87.0 | 87.0 | 87.0 | 87.0 |
| 3150 Hz | 75.8 | 76.8 | 80.9 | 83.1 | 83.1 | 84.3 | 84.3 | 84.3 | 84.3 | 84.3 |
| 4000 Hz | 75.9 | 76.9 | 76.3 | 78.5 | 78.5 | 80.5 | 80.5 | 80.5 | 80.5 | 80.5 |
| 5000 Hz | 71.7 | 72.7 | 74.3 | 76.5 | 76.5 | 76.2 | 76.2 | 76.2 | 76.2 | 76.2 |
| 6300 Hz | 68.7 | 69.7 | 73.3 | 75.5 | 75.5 | 76.6 | 76.6 | 76.6 | 76.6 | 76.6 |
| 8000 Hz | 67.8 | 68.8 | 72.2 | 74.4 | 74.4 | 75.7 | 75.7 | 75.7 | 75.7 | 75.7 |
| 10000 Hz | 65.3 | 66.3 | 69.8 | 72.0 | 72.0 | 72.9 | 72.9 | 72.9 | 72.9 | 72.9 |
| Total SPL unweighted dB(LIN) | 108.9 | 109.9 | 114.0 | 116.2 | 116.2 | 116.7 | 116.7 | 116.7 | 116.7 | 116.7 |
| Total SPL A-weighted dB(A) | 94.0 | 95.0 | 100.3 | 102.5 | 102.5 | 102.5 | 102.5 | 102.5 | 102.5 | 102.5 |

2.8.2 Hub height 125 m

Not available

2.9 Sound optimized mode - Mode 8

2.9.1 Hub height 105 m

Mode & hub height upon request

| 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 | 107.1 | 108.8 | 108.8 | 109.1 | 109.1 | 109.1 | 109.1 | 109.1 |
| 25 Hz | 100.7 | 101.7 | 105.9 | 107.6 | 107.6 | 107.5 | 107.5 | 107.5 | 107.5 | 107.5 |
| 31.5 Hz | 99.2 | 100.2 | 104.8 | 106.5 | 106.5 | 107.3 | 107.3 | 107.3 | 107.3 | 107.3 |
| 40 Hz | 100.4 | 101.4 | 104.5 | 106.2 | 106.2 | 106.3 | 106.3 | 106.3 | 106.3 | 106.3 |
| 50 Hz | 97.3 | 98.3 | 103.5 | 105.2 | 105.2 | 107.1 | 107.1 | 107.1 | 107.1 | 107.1 |
| 63 Hz | 98.1 | 99.1 | 102.0 | 103.7 | 103.7 | 104.3 | 104.3 | 104.3 | 104.3 | 104.3 |
| 80 Hz | 97.3 | 98.3 | 101.8 | 103.5 | 103.5 | 103.3 | 103.3 | 103.3 | 103.3 | 103.3 |
| 100 Hz | 95.0 | 96.0 | 100.6 | 102.3 | 102.3 | 104.7 | 104.7 | 104.7 | 104.7 | 104.7 |
| 125 Hz | 94.3 | 95.3 | 98.6 | 100.3 | 100.3 | 100.3 | 100.3 | 100.3 | 100.3 | 100.3 |
| 160 Hz | 94.6 | 95.6 | 98.7 | 100.4 | 100.4 | 98.7 | 98.7 | 98.7 | 98.7 | 98.7 |
| 200 Hz | 91.3 | 92.3 | 96.3 | 98.0 | 98.0 | 97.6 | 97.6 | 97.6 | 97.6 | 97.6 |
| 250 Hz | 90.4 | 91.4 | 95.6 | 97.3 | 97.3 | 96.3 | 96.3 | 96.3 | 96.3 | 96.3 |
| 315 Hz | 89.6 | 90.6 | 95.2 | 96.9 | 96.9 | 97.5 | 97.5 | 97.5 | 97.5 | 97.5 |
| 400 Hz | 88.1 | 89.1 | 93.6 | 95.3 | 95.3 | 95.3 | 95.3 | 95.3 | 95.3 | 95.3 |
| 500 Hz | 85.4 | 86.4 | 91.8 | 93.5 | 93.5 | 94.0 | 94.0 | 94.0 | 94.0 | 94.0 |
| 630 Hz | 85.1 | 86.1 | 92.1 | 93.8 | 93.8 | 94.6 | 94.6 | 94.6 | 94.6 | 94.6 |
| 800 Hz | 83.4 | 84.4 | 90.5 | 92.2 | 92.2 | 92.6 | 92.6 | 92.6 | 92.6 | 92.6 |
| 1000 Hz | 83.9 | 84.9 | 91.1 | 92.8 | 92.8 | 92.6 | 92.6 | 92.6 | 92.6 | 92.6 |
| 1250 Hz | 82.9 | 83.9 | 90.1 | 91.8 | 91.8 | 91.3 | 91.3 | 91.3 | 91.3 | 91.3 |
| 1600 Hz | 82.0 | 83.0 | 89.4 | 91.1 | 91.1 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 |
| 2000 Hz | 80.3 | 81.3 | 87.5 | 89.2 | 89.2 | 88.5 | 88.5 | 88.5 | 88.5 | 88.5 |
| 2500 Hz | 77.9 | 78.9 | 85.0 | 86.7 | 86.7 | 86.5 | 86.5 | 86.5 | 86.5 | 86.5 |
| 3150 Hz | 75.8 | 76.8 | 80.9 | 82.6 | 82.6 | 83.8 | 83.8 | 83.8 | 83.8 | 83.8 |
| 4000 Hz | 75.9 | 76.9 | 76.3 | 78.0 | 78.0 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 |
| 5000 Hz | 71.7 | 72.7 | 74.3 | 76.0 | 76.0 | 75.7 | 75.7 | 75.7 | 75.7 | 75.7 |
| 6300 Hz | 68.7 | 69.7 | 73.3 | 75.0 | 75.0 | 76.1 | 76.1 | 76.1 | 76.1 | 76.1 |
| 8000 Hz | 67.8 | 68.8 | 72.2 | 73.9 | 73.9 | 75.2 | 75.2 | 75.2 | 75.2 | 75.2 |
| 10000 Hz | 65.3 | 66.3 | 69.8 | 71.5 | 71.5 | 72.4 | 72.4 | 72.4 | 72.4 | 72.4 |
| Total SPL unweighted dB(LIN) | 108.9 | 109.9 | 114.0 | 115.7 | 115.7 | 116.2 | 116.2 | 116.2 | 116.2 | 116.2 |
| Total SPL A-weighted dB(A) | 94.0 | 95.0 | 100.3 | 102.0 | 102.0 | 102.0 | 102.0 | 102.0 | 102.0 | 102.0 |

2.9.2 Hub height 125 m


Not available

2.10 Sound optimized mode - Mode 9

2.10.1 Hub height 105 m

Mode & hub height upon request

| 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 | 106.9 | 107.3 | 107.3 | 107.6 | 107.6 | 107.6 | 107.6 | 107.6 |
| 25 Hz | 100.7 | 101.7 | 105.7 | 106.1 | 106.1 | 106.0 | 106.0 | 106.0 | 106.0 | 106.0 |
| 31.5 Hz | 99.2 | 100.2 | 104.6 | 105.0 | 105.0 | 105.8 | 105.8 | 105.8 | 105.8 | 105.8 |
| 40 Hz | 100.4 | 101.4 | 104.3 | 104.7 | 104.7 | 104.8 | 104.8 | 104.8 | 104.8 | 104.8 |
| 50 Hz | 97.3 | 98.3 | 103.3 | 103.7 | 103.7 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 |
| 63 Hz | 98.1 | 99.1 | 101.8 | 102.2 | 102.2 | 102.8 | 102.8 | 102.8 | 102.8 | 102.8 |
| 80 Hz | 97.3 | 98.3 | 101.6 | 102.0 | 102.0 | 101.8 | 101.8 | 101.8 | 101.8 | 101.8 |
| 100 Hz | 95.0 | 96.0 | 100.4 | 100.8 | 100.8 | 103.2 | 103.2 | 103.2 | 103.2 | 103.2 |
| 125 Hz | 94.3 | 95.3 | 98.4 | 98.8 | 98.8 | 98.8 | 98.8 | 98.8 | 98.8 | 98.8 |
| 160 Hz | 94.6 | 95.6 | 98.5 | 98.9 | 98.9 | 97.2 | 97.2 | 97.2 | 97.2 | 97.2 |
| 200 Hz | 91.3 | 92.3 | 96.1 | 96.5 | 96.5 | 96.1 | 96.1 | 96.1 | 96.1 | 96.1 |
| 250 Hz | 90.4 | 91.4 | 95.4 | 95.8 | 95.8 | 94.8 | 94.8 | 94.8 | 94.8 | 94.8 |
| 315 Hz | 89.6 | 90.6 | 95.0 | 95.4 | 95.4 | 96.0 | 96.0 | 96.0 | 96.0 | 96.0 |
| 400 Hz | 88.1 | 89.1 | 93.4 | 93.8 | 93.8 | 93.8 | 93.8 | 93.8 | 93.8 | 93.8 |
| 500 Hz | 85.4 | 86.4 | 91.6 | 92.0 | 92.0 | 92.5 | 92.5 | 92.5 | 92.5 | 92.5 |
| 630 Hz | 85.1 | 86.1 | 91.9 | 92.3 | 92.3 | 93.1 | 93.1 | 93.1 | 93.1 | 93.1 |
| 800 Hz | 83.4 | 84.4 | 90.3 | 90.7 | 90.7 | 91.1 | 91.1 | 91.1 | 91.1 | 91.1 |
| 1000 Hz | 83.9 | 84.9 | 90.9 | 91.3 | 91.3 | 91.1 | 91.1 | 91.1 | 91.1 | 91.1 |
| 1250 Hz | 82.9 | 83.9 | 89.9 | 90.3 | 90.3 | 89.8 | 89.8 | 89.8 | 89.8 | 89.8 |
| 1600 Hz | 82.0 | 83.0 | 89.2 | 89.6 | 89.6 | 88.4 | 88.4 | 88.4 | 88.4 | 88.4 |
| 2000 Hz | 80.3 | 81.3 | 87.3 | 87.7 | 87.7 | 87.0 | 87.0 | 87.0 | 87.0 | 87.0 |
| 2500 Hz | 77.9 | 78.9 | 84.8 | 85.2 | 85.2 | 85.0 | 85.0 | 85.0 | 85.0 | 85.0 |
| 3150 Hz | 75.8 | 76.8 | 80.7 | 81.1 | 81.1 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 |
| 4000 Hz | 75.9 | 76.9 | 76.1 | 76.5 | 76.5 | 78.5 | 78.5 | 78.5 | 78.5 | 78.5 |
| 5000 Hz | 71.7 | 72.7 | 74.1 | 74.5 | 74.5 | 74.2 | 74.2 | 74.2 | 74.2 | 74.2 |
| 6300 Hz | 68.7 | 69.7 | 73.1 | 73.5 | 73.5 | 74.6 | 74.6 | 74.6 | 74.6 | 74.6 |
| 8000 Hz | 67.8 | 68.8 | 72.0 | 72.4 | 72.4 | 73.7 | 73.7 | 73.7 | 73.7 | 73.7 |
| 10000 Hz | 65.3 | 66.3 | 69.6 | 70.0 | 70.0 | 70.9 | 70.9 | 70.9 | 70.9 | 70.9 |
| Total SPL unweighted dB(LIN) | 108.9 | 109.9 | 113.8 | 114.2 | 114.2 | 114.7 | 114.7 | 114.7 | 114.7 | 114.7 |
| Total SPL A-weighted dB(A) | 94.0 | 95.0 | 100.1 | 100.5 | 100.5 | 100.5 | 100.5 | 100.5 | 100.5 | 100.5 |

| | | |
|------------------------------------|---|---|
| E0004269934 Rev. 0 / 2017-08-29 | Third octave sound power levels - unweighted - Nordex N149/4.0-4.5 STE - Operational Modes |  |
|------------------------------------|---|---|

2.11 Sound optimized mode - Mode 10

2.11.1 Hub height 105 m


Mode & hub height upon request

| 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 | 106.6 | 106.8 | 106.8 | 107.1 | 107.1 | 107.1 | 107.1 | 107.1 |
| 25 Hz | 100.7 | 101.7 | 105.4 | 105.6 | 105.6 | 105.5 | 105.5 | 105.5 | 105.5 | 105.5 |
| 31.5 Hz | 99.2 | 100.2 | 104.3 | 104.5 | 104.5 | 105.3 | 105.3 | 105.3 | 105.3 | 105.3 |
| 40 Hz | 100.4 | 101.4 | 104.0 | 104.2 | 104.2 | 104.3 | 104.3 | 104.3 | 104.3 | 104.3 |
| 50 Hz | 97.3 | 98.3 | 103.0 | 103.2 | 103.2 | 105.1 | 105.1 | 105.1 | 105.1 | 105.1 |
| 63 Hz | 98.1 | 99.1 | 101.5 | 101.7 | 101.7 | 102.3 | 102.3 | 102.3 | 102.3 | 102.3 |
| 80 Hz | 97.3 | 98.3 | 101.3 | 101.5 | 101.5 | 101.3 | 101.3 | 101.3 | 101.3 | 101.3 |
| 100 Hz | 95.0 | 96.0 | 100.1 | 100.3 | 100.3 | 102.7 | 102.7 | 102.7 | 102.7 | 102.7 |
| 125 Hz | 94.3 | 95.3 | 98.1 | 98.3 | 98.3 | 98.3 | 98.3 | 98.3 | 98.3 | 98.3 |
| 160 Hz | 94.6 | 95.6 | 98.2 | 98.4 | 98.4 | 96.7 | 96.7 | 96.7 | 96.7 | 96.7 |
| 200 Hz | 91.3 | 92.3 | 95.8 | 96.0 | 96.0 | 95.6 | 95.6 | 95.6 | 95.6 | 95.6 |
| 250 Hz | 90.4 | 91.4 | 95.1 | 95.3 | 95.3 | 94.3 | 94.3 | 94.3 | 94.3 | 94.3 |
| 315 Hz | 89.6 | 90.6 | 94.7 | 94.9 | 94.9 | 95.5 | 95.5 | 95.5 | 95.5 | 95.5 |
| 400 Hz | 88.1 | 89.1 | 93.1 | 93.3 | 93.3 | 93.3 | 93.3 | 93.3 | 93.3 | 93.3 |
| 500 Hz | 85.4 | 86.4 | 91.3 | 91.5 | 91.5 | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 |
| 630 Hz | 85.1 | 86.1 | 91.6 | 91.8 | 91.8 | 92.6 | 92.6 | 92.6 | 92.6 | 92.6 |
| 800 Hz | 83.4 | 84.4 | 90.0 | 90.2 | 90.2 | 90.6 | 90.6 | 90.6 | 90.6 | 90.6 |
| 1000 Hz | 83.9 | 84.9 | 90.6 | 90.8 | 90.8 | 90.6 | 90.6 | 90.6 | 90.6 | 90.6 |
| 1250 Hz | 82.9 | 83.9 | 89.6 | 89.8 | 89.8 | 89.3 | 89.3 | 89.3 | 89.3 | 89.3 |
| 1600 Hz | 82.0 | 83.0 | 88.9 | 89.1 | 89.1 | 87.9 | 87.9 | 87.9 | 87.9 | 87.9 |
| 2000 Hz | 80.3 | 81.3 | 87.0 | 87.2 | 87.2 | 86.5 | 86.5 | 86.5 | 86.5 | 86.5 |
| 2500 Hz | 77.9 | 78.9 | 84.5 | 84.7 | 84.7 | 84.5 | 84.5 | 84.5 | 84.5 | 84.5 |
| 3150 Hz | 75.8 | 76.8 | 80.4 | 80.6 | 80.6 | 81.8 | 81.8 | 81.8 | 81.8 | 81.8 |
| 4000 Hz | 75.9 | 76.9 | 75.8 | 76.0 | 76.0 | 78.0 | 78.0 | 78.0 | 78.0 | 78.0 |
| 5000 Hz | 71.7 | 72.7 | 73.8 | 74.0 | 74.0 | 73.7 | 73.7 | 73.7 | 73.7 | 73.7 |
| 6300 Hz | 68.7 | 69.7 | 72.8 | 73.0 | 73.0 | 74.1 | 74.1 | 74.1 | 74.1 | 74.1 |
| 8000 Hz | 67.8 | 68.8 | 71.7 | 71.9 | 71.9 | 73.2 | 73.2 | 73.2 | 73.2 | 73.2 |
| 10000 Hz | 65.3 | 66.3 | 69.3 | 69.5 | 69.5 | 70.4 | 70.4 | 70.4 | 70.4 | 70.4 |
| Total SPL unweighted dB(LIN) | 108.9 | 109.9 | 113.5 | 113.7 | 113.7 | 114.2 | 114.2 | 114.2 | 114.2 | 114.2 |
| Total SPL A-weighted dB(A) | 94.0 | 95.0 | 99.8 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2.12 Sound optimized mode - Mode 11

2.12.1 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 | 106.3 | 106.3 | 106.6 | 106.6 | 106.6 | 106.6 | 106.6 | 106.6 |
| 25 Hz | 100.7 | 101.7 | 105.1 | 105.1 | 105.0 | 105.0 | 105.0 | 105.0 | 105.0 | 105.0 |
| 31.5 Hz | 99.2 | 100.2 | 104.0 | 104.0 | 104.8 | 104.8 | 104.8 | 104.8 | 104.8 | 104.8 |
| 40 Hz | 100.4 | 101.4 | 103.7 | 103.7 | 103.8 | 103.8 | 103.8 | 103.8 | 103.8 | 103.8 |
| 50 Hz | 97.3 | 98.3 | 102.7 | 102.7 | 104.6 | 104.6 | 104.6 | 104.6 | 104.6 | 104.6 |
| 63 Hz | 98.1 | 99.1 | 101.2 | 101.2 | 101.8 | 101.8 | 101.8 | 101.8 | 101.8 | 101.8 |
| 80 Hz | 97.3 | 98.3 | 101.0 | 101.0 | 100.8 | 100.8 | 100.8 | 100.8 | 100.8 | 100.8 |
| 100 Hz | 95.0 | 96.0 | 99.8 | 99.8 | 102.2 | 102.2 | 102.2 | 102.2 | 102.2 | 102.2 |
| 125 Hz | 94.3 | 95.3 | 97.8 | 97.8 | 97.8 | 97.8 | 97.8 | 97.8 | 97.8 | 97.8 |
| 160 Hz | 94.6 | 95.6 | 97.9 | 97.9 | 96.2 | 96.2 | 96.2 | 96.2 | 96.2 | 96.2 |
| 200 Hz | 91.3 | 92.3 | 95.5 | 95.5 | 95.1 | 95.1 | 95.1 | 95.1 | 95.1 | 95.1 |
| 250 Hz | 90.4 | 91.4 | 94.8 | 94.8 | 93.8 | 93.8 | 93.8 | 93.8 | 93.8 | 93.8 |
| 315 Hz | 89.6 | 90.6 | 94.4 | 94.4 | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 |
| 400 Hz | 88.1 | 89.1 | 92.8 | 92.8 | 92.8 | 92.8 | 92.8 | 92.8 | 92.8 | 92.8 |
| 500 Hz | 85.4 | 86.4 | 91.0 | 91.0 | 91.5 | 91.5 | 91.5 | 91.5 | 91.5 | 91.5 |
| 630 Hz | 85.1 | 86.1 | 91.3 | 91.3 | 92.1 | 92.1 | 92.1 | 92.1 | 92.1 | 92.1 |
| 800 Hz | 83.4 | 84.4 | 89.7 | 89.7 | 90.1 | 90.1 | 90.1 | 90.1 | 90.1 | 90.1 |
| 1000 Hz | 83.9 | 84.9 | 90.3 | 90.3 | 90.1 | 90.1 | 90.1 | 90.1 | 90.1 | 90.1 |
| 1250 Hz | 82.9 | 83.9 | 89.3 | 89.3 | 88.8 | 88.8 | 88.8 | 88.8 | 88.8 | 88.8 |
| 1600 Hz | 82.0 | 83.0 | 88.6 | 88.6 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 | 87.4 |
| 2000 Hz | 80.3 | 81.3 | 86.7 | 86.7 | 86.0 | 86.0 | 86.0 | 86.0 | 86.0 | 86.0 |
| 2500 Hz | 77.9 | 78.9 | 84.2 | 84.2 | 84.0 | 84.0 | 84.0 | 84.0 | 84.0 | 84.0 |
| 3150 Hz | 75.8 | 76.8 | 80.1 | 80.1 | 81.3 | 81.3 | 81.3 | 81.3 | 81.3 | 81.3 |
| 4000 Hz | 75.9 | 76.9 | 75.5 | 75.5 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 |
| 5000 Hz | 71.7 | 72.7 | 73.5 | 73.5 | 73.2 | 73.2 | 73.2 | 73.2 | 73.2 | 73.2 |
| 6300 Hz | 68.7 | 69.7 | 72.5 | 72.5 | 73.6 | 73.6 | 73.6 | 73.6 | 73.6 | 73.6 |
| 8000 Hz | 67.8 | 68.8 | 71.4 | 71.4 | 72.7 | 72.7 | 72.7 | 72.7 | 72.7 | 72.7 |
| 10000 Hz | 65.3 | 66.3 | 69.0 | 69.0 | 69.9 | 69.9 | 69.9 | 69.9 | 69.9 | 69.9 |
| Total SPL unweighted dB(LIN) | 108.9 | 109.9 | 113.2 | 113.2 | 113.7 | 113.7 | 113.7 | 113.7 | 113.7 | 113.7 |
| Total SPL A-weighted dB(A) | 94.0 | 95.0 | 99.5 | 99.5 | 99.5 | 99.5 | 99.5 | 99.5 | 99.5 | 99.5 |

| | | |
|------------------------------------|---|---|
| E0004269934 Rev. 0 / 2017-08-29 | Third octave sound power levels - unweighted - Nordex N149/4.0-4.5 STE - Operational Modes |  |
|------------------------------------|---|---|

2.13 Sound optimized mode - Mode 12

2.13.1 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 | 105.8 | 105.8 | 106.1 | 106.1 | 106.1 | 106.1 | 106.1 | 106.1 |
| 25 Hz | 100.7 | 101.7 | 104.6 | 104.6 | 104.5 | 104.5 | 104.5 | 104.5 | 104.5 | 104.5 |
| 31.5 Hz | 99.2 | 100.2 | 103.5 | 103.5 | 104.3 | 104.3 | 104.3 | 104.3 | 104.3 | 104.3 |
| 40 Hz | 100.4 | 101.4 | 103.2 | 103.2 | 103.3 | 103.3 | 103.3 | 103.3 | 103.3 | 103.3 |
| 50 Hz | 97.3 | 98.3 | 102.2 | 102.2 | 104.1 | 104.1 | 104.1 | 104.1 | 104.1 | 104.1 |
| 63 Hz | 98.1 | 99.1 | 100.7 | 100.7 | 101.3 | 101.3 | 101.3 | 101.3 | 101.3 | 101.3 |
| 80 Hz | 97.3 | 98.3 | 100.5 | 100.5 | 100.3 | 100.3 | 100.3 | 100.3 | 100.3 | 100.3 |
| 100 Hz | 95.0 | 96.0 | 99.3 | 99.3 | 101.7 | 101.7 | 101.7 | 101.7 | 101.7 | 101.7 |
| 125 Hz | 94.3 | 95.3 | 97.3 | 97.3 | 97.3 | 97.3 | 97.3 | 97.3 | 97.3 | 97.3 |
| 160 Hz | 94.6 | 95.6 | 97.4 | 97.4 | 95.7 | 95.7 | 95.7 | 95.7 | 95.7 | 95.7 |
| 200 Hz | 91.3 | 92.3 | 95.0 | 95.0 | 94.6 | 94.6 | 94.6 | 94.6 | 94.6 | 94.6 |
| 250 Hz | 90.4 | 91.4 | 94.3 | 94.3 | 93.3 | 93.3 | 93.3 | 93.3 | 93.3 | 93.3 |
| 315 Hz | 89.6 | 90.6 | 93.9 | 93.9 | 94.5 | 94.5 | 94.5 | 94.5 | 94.5 | 94.5 |
| 400 Hz | 88.1 | 89.1 | 92.3 | 92.3 | 92.3 | 92.3 | 92.3 | 92.3 | 92.3 | 92.3 |
| 500 Hz | 85.4 | 86.4 | 90.5 | 90.5 | 91.0 | 91.0 | 91.0 | 91.0 | 91.0 | 91.0 |
| 630 Hz | 85.1 | 86.1 | 90.8 | 90.8 | 91.6 | 91.6 | 91.6 | 91.6 | 91.6 | 91.6 |
| 800 Hz | 83.4 | 84.4 | 89.2 | 89.2 | 89.6 | 89.6 | 89.6 | 89.6 | 89.6 | 89.6 |
| 1000 Hz | 83.9 | 84.9 | 89.8 | 89.8 | 89.6 | 89.6 | 89.6 | 89.6 | 89.6 | 89.6 |
| 1250 Hz | 82.9 | 83.9 | 88.8 | 88.8 | 88.3 | 88.3 | 88.3 | 88.3 | 88.3 | 88.3 |
| 1600 Hz | 82.0 | 83.0 | 88.1 | 88.1 | 86.9 | 86.9 | 86.9 | 86.9 | 86.9 | 86.9 |
| 2000 Hz | 80.3 | 81.3 | 86.2 | 86.2 | 85.5 | 85.5 | 85.5 | 85.5 | 85.5 | 85.5 |
| 2500 Hz | 77.9 | 78.9 | 83.7 | 83.7 | 83.5 | 83.5 | 83.5 | 83.5 | 83.5 | 83.5 |
| 3150 Hz | 75.8 | 76.8 | 79.6 | 79.6 | 80.8 | 80.8 | 80.8 | 80.8 | 80.8 | 80.8 |
| 4000 Hz | 75.9 | 76.9 | 75.0 | 75.0 | 77.0 | 77.0 | 77.0 | 77.0 | 77.0 | 77.0 |
| 5000 Hz | 71.7 | 72.7 | 73.0 | 73.0 | 72.7 | 72.7 | 72.7 | 72.7 | 72.7 | 72.7 |
| 6300 Hz | 68.7 | 69.7 | 72.0 | 72.0 | 73.1 | 73.1 | 73.1 | 73.1 | 73.1 | 73.1 |
| 8000 Hz | 67.8 | 68.8 | 70.9 | 70.9 | 72.2 | 72.2 | 72.2 | 72.2 | 72.2 | 72.2 |
| 10000 Hz | 65.3 | 66.3 | 68.5 | 68.5 | 69.4 | 69.4 | 69.4 | 69.4 | 69.4 | 69.4 |
| Total SPL unweighted dB(LIN) | 108.9 | 109.9 | 112.7 | 112.7 | 113.2 | 113.2 | 113.2 | 113.2 | 113.2 | 113.2 |
| Total SPL A-weighted dB(A) | 94.0 | 95.0 | 99.0 | 99.0 | 99.0 | 99.0 | 99.0 | 99.0 | 99.0 | 99.0 |

2.14 Sound optimized mode - Mode 13

2.14.1 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 | 105.3 | 105.3 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 | 105.6 |
| 25 Hz | 100.7 | 101.7 | 104.1 | 104.1 | 104.0 | 104.0 | 104.0 | 104.0 | 104.0 | 104.0 |
| 31.5 Hz | 99.2 | 100.2 | 103.0 | 103.0 | 103.8 | 103.8 | 103.8 | 103.8 | 103.8 | 103.8 |
| 40 Hz | 100.4 | 101.4 | 102.7 | 102.7 | 102.8 | 102.8 | 102.8 | 102.8 | 102.8 | 102.8 |
| 50 Hz | 97.3 | 98.3 | 101.7 | 101.7 | 103.6 | 103.6 | 103.6 | 103.6 | 103.6 | 103.6 |
| 63 Hz | 98.1 | 99.1 | 100.2 | 100.2 | 100.8 | 100.8 | 100.8 | 100.8 | 100.8 | 100.8 |
| 80 Hz | 97.3 | 98.3 | 100.0 | 100.0 | 99.8 | 99.8 | 99.8 | 99.8 | 99.8 | 99.8 |
| 100 Hz | 95.0 | 96.0 | 98.8 | 98.8 | 101.2 | 101.2 | 101.2 | 101.2 | 101.2 | 101.2 |
| 125 Hz | 94.3 | 95.3 | 96.8 | 96.8 | 96.8 | 96.8 | 96.8 | 96.8 | 96.8 | 96.8 |
| 160 Hz | 94.6 | 95.6 | 96.9 | 96.9 | 95.2 | 95.2 | 95.2 | 95.2 | 95.2 | 95.2 |
| 200 Hz | 91.3 | 92.3 | 94.5 | 94.5 | 94.1 | 94.1 | 94.1 | 94.1 | 94.1 | 94.1 |
| 250 Hz | 90.4 | 91.4 | 93.8 | 93.8 | 92.8 | 92.8 | 92.8 | 92.8 | 92.8 | 92.8 |
| 315 Hz | 89.6 | 90.6 | 93.4 | 93.4 | 94.0 | 94.0 | 94.0 | 94.0 | 94.0 | 94.0 |
| 400 Hz | 88.1 | 89.1 | 91.8 | 91.8 | 91.8 | 91.8 | 91.8 | 91.8 | 91.8 | 91.8 |
| 500 Hz | 85.4 | 86.4 | 90.0 | 90.0 | 90.5 | 90.5 | 90.5 | 90.5 | 90.5 | 90.5 |
| 630 Hz | 85.1 | 86.1 | 90.3 | 90.3 | 91.1 | 91.1 | 91.1 | 91.1 | 91.1 | 91.1 |
| 800 Hz | 83.4 | 84.4 | 88.7 | 88.7 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 |
| 1000 Hz | 83.9 | 84.9 | 89.3 | 89.3 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 | 89.1 |
| 1250 Hz | 82.9 | 83.9 | 88.3 | 88.3 | 87.8 | 87.8 | 87.8 | 87.8 | 87.8 | 87.8 |
| 1600 Hz | 82.0 | 83.0 | 87.6 | 87.6 | 86.4 | 86.4 | 86.4 | 86.4 | 86.4 | 86.4 |
| 2000 Hz | 80.3 | 81.3 | 85.7 | 85.7 | 85.0 | 85.0 | 85.0 | 85.0 | 85.0 | 85.0 |
| 2500 Hz | 77.9 | 78.9 | 83.2 | 83.2 | 83.0 | 83.0 | 83.0 | 83.0 | 83.0 | 83.0 |
| 3150 Hz | 75.8 | 76.8 | 79.1 | 79.1 | 80.3 | 80.3 | 80.3 | 80.3 | 80.3 | 80.3 |
| 4000 Hz | 75.9 | 76.9 | 74.5 | 74.5 | 76.5 | 76.5 | 76.5 | 76.5 | 76.5 | 76.5 |
| 5000 Hz | 71.7 | 72.7 | 72.5 | 72.5 | 72.2 | 72.2 | 72.2 | 72.2 | 72.2 | 72.2 |
| 6300 Hz | 68.7 | 69.7 | 71.5 | 71.5 | 72.6 | 72.6 | 72.6 | 72.6 | 72.6 | 72.6 |
| 8000 Hz | 67.8 | 68.8 | 70.4 | 70.4 | 71.7 | 71.7 | 71.7 | 71.7 | 71.7 | 71.7 |
| 10000 Hz | 65.3 | 66.3 | 68.0 | 68.0 | 68.9 | 68.9 | 68.9 | 68.9 | 68.9 | 68.9 |
| Total SPL unweighted dB(LIN) | 108.9 | 109.9 | 112.2 | 112.2 | 112.7 | 112.7 | 112.7 | 112.7 | 112.7 | 112.7 |
| Total SPL A-weighted dB(A) | 94.0 | 95.0 | 98.5 | 98.5 | 98.5 | 98.5 | 98.5 | 98.5 | 98.5 | 98.5 |