



Document name:

MAC Viper Profile – Sound measurement report



Document no.:

Date of measurements : 17-04-2013

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Title :

MAC Viper Profile Sound measurement report

Test conditions :

Test is done according to : ISO 3743-2:1994

Measurement object :

Make : Martin Professional A/S
 Model : MAC Viper Profile
 Serial nr : 0583040005
 Software vers : 1.5.0

Results :

The results of the test and images of the test setup can be found on page 2
 Martin Professional A/S, R&D QA is responsible for the test results in this report.

Environment :

Temperature : 20,2°C TA
 Humidity : 25,6 %RH
 Mains : 230V, 50Hz
 Warm up time : Min 20 minutes at full intensity.
 Fixture placement : Fixture is placed at least one meter from walls and ceiling, as described in the Standard ISO 3743-2:1994

Remarks :

Test results apply only to the tested specimen.

| Rev: (last five) | Made by: | Description: | Approved by: | Date approved: |
|------------------|-------------|-------------------------------------|--------------|----------------|
| A | Brian Staal | MAC Viper Profile Sound Measurement | | |
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| | | | | |
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**Setup :**

The measurements of sound power were made in DELTA's test laboratory in Aarhus Denmark. Measuring room 1. The test setup was as shown in the picture "Figure 1"



Figure 1 :
Test setup

Product was allowed a min of 20 min of warm up time before measurements was performed.

**Measurement method :**

The sound power level was determined in accordance with ISO3743-2:1994. The substitution method was applied using a sound reference sound source. The microphone was moved in a circle with a radius of 1.35 meters, and an average of two complete cycles was made corresponding to a measuring time of 128 seconds.

Microphone is placed in accordance to the standard ISO3743-2:1994

Instrumentation :

Please refer to Page 5, for a full instrumentation list.

Results :

The MAC Viper Profile was measured in 2 different settings :

1. All effects static, Lamp ON 100% Output
2. Lamp ON 100% Output, Cyan & Yellow color 100% (Mixed Green)

The measurement results corrected for background noise are stated in the table below for 1/1-octave band and A-weighted values. Results marked with an * does not meet the 4 dB criterion in clause 7.8 in ISO 3743-2:1994 for the difference between the measured sound power level and the background noise. These results are therefore less accurate than stated by the standard and are corrected for background noise with a maximum of 2 dB only

All results are rounded to the nearest 0.5 dB.

1/1-octave bands and A-weighted sound power levels

| 1/1 Octave band, HZ | Sound Power Level Lw, dB re 1 pW Scenario 1. | Sound Power Level Lw, dB re 1 pW Scenario 2. |
|---------------------|---|---|
| 125 | 31,5 | 32,0 |
| 250 | 31,5 | 42,0 |
| 500 | 45,0 | 47,5 |
| 1000 | 45,7 | 49,0 |
| 2000 | 48,5 | 51,0 |
| 4000 | 40,5 | 44,5 |
| 8000 | 32,0 | 33,0 |
| A-weighted | 53,0 | 55,0 |

Table 1

*Results marked with a * does not meet the 4 dB criterion in clause 7.8 in ISO 3743-2:1994 for the difference between the measured sound pressure level and the background noise .*

These results are corrected for background noise with a maximum of 2 dB only.



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Instrumentation :

| No. | Equipment | Make | Type |
|--------|------------------------|----------------------|--------|
| 09L019 | ½" Microphone | Brüel & Kjær | 4166 |
| 09L010 | Preamplifier | Brüel & Kjær | 2669 |
| 02L020 | Calibrator | Brüel & Kjær | 4231 |
| 17L041 | Microphone Supply | Brüel & Kjær | 5935 |
| 14L005 | Data aq. Card | National Instruments | NI9162 |
| 04L008 | Reference sound source | Brüel & Kjær | 4204 |
| 01L021 | Barometer | Lufft | 2187 |
| 01L015 | Thermohygrograph | Lambrecht | 252 Ua |