



AN2 Anechoic Chamber

Introduction:

This chamber provides a reliable and stable acoustic test environment for speakers and microphones components, earphones, Mobile-phone, tablet, smart speaker box, etc.



Chamber Features:

- High isolation against background noise.
- Uniform sound field across the measurement plane.

Specification :

Outside Dimension: (Without wheels)	D:1760 mm * W:1800 mm * H:2129mm
Inside Dimension:	D:1000 mm * W:1000 mm * H:1000 mm
Background Noise:	≤ 20 dBA re. 20uPa, (A-weighting) (when outside noise ≤ 70 dB)
Sound Isolation Ability:	Frequency above 315Hz Leq ≥ 50 dB SPL ref. 20u Pa



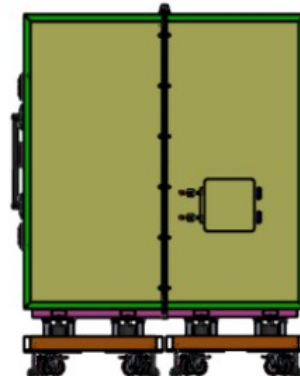
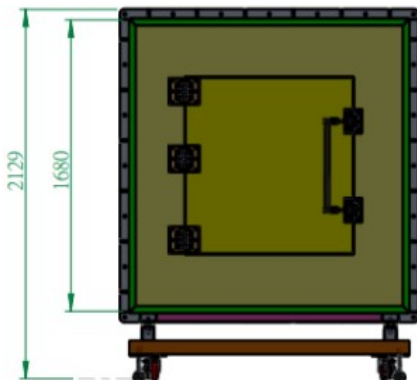
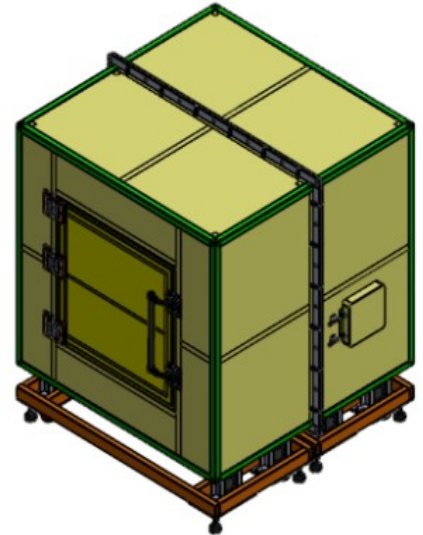
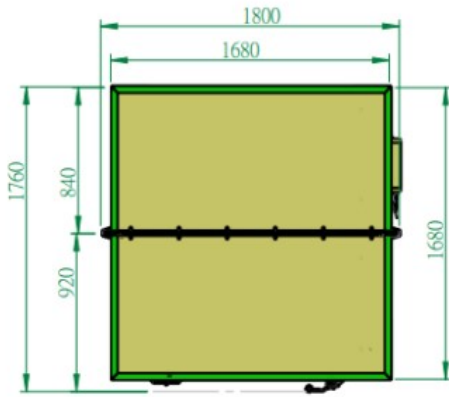
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Dimension :

Outside size: 1800*1760*2129mm(with Wheels)



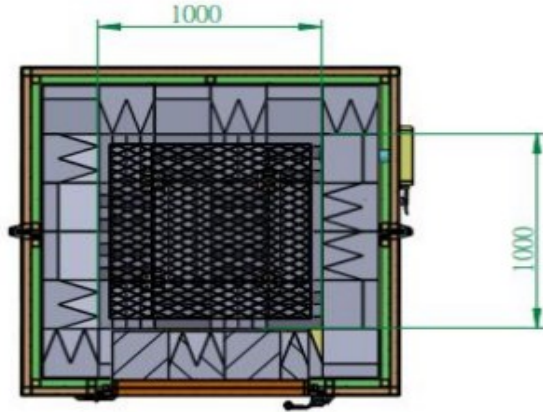


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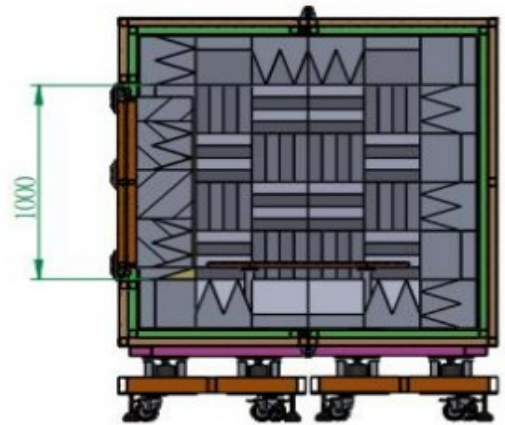
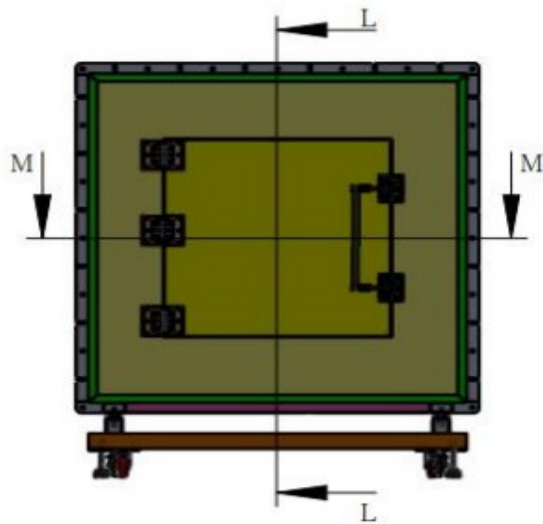
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Inside size: 1000*1000*1000mm



剖面圖 M-M
比例 1 : 35





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1. Integrated Specification:

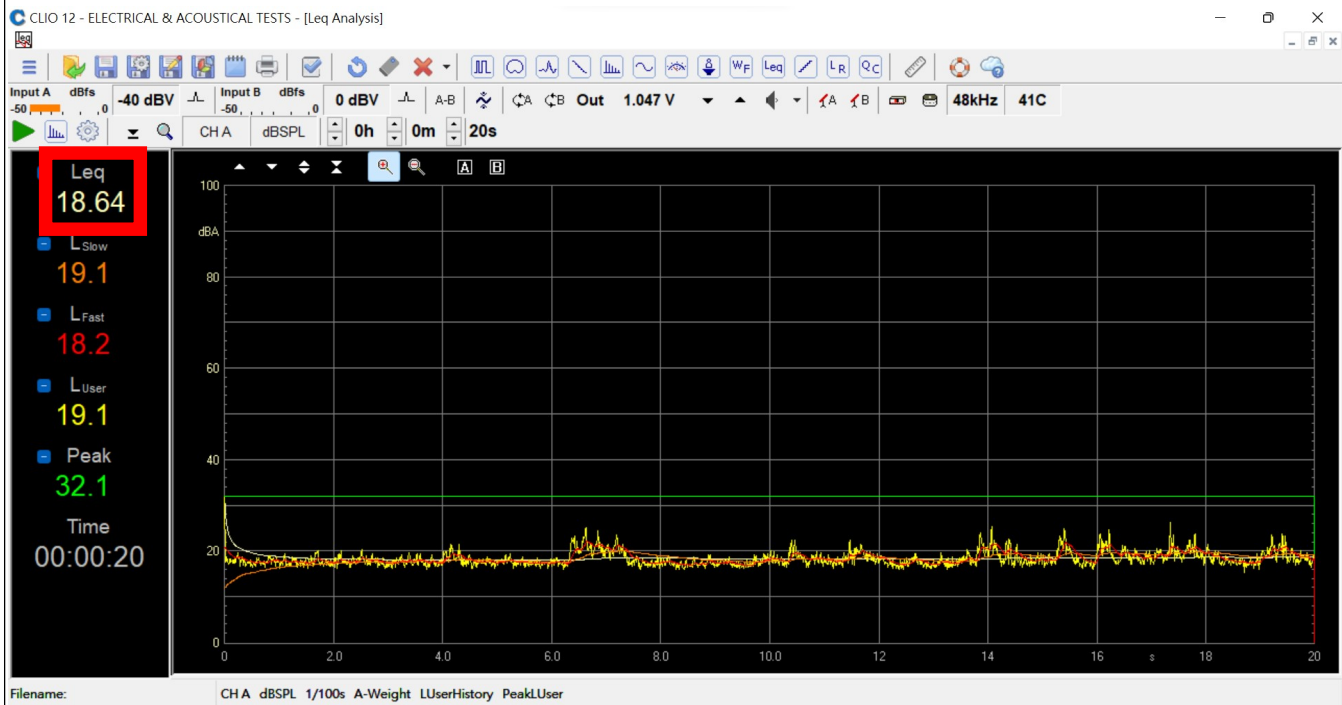
1.1 Basic Request:

1.1.1 Inner Size(L*W*H)	1000*1000*1000mm
1.1.2 Outside Size(L*W*H)	1760*1800*2129mm (With Wheels)
1.1.3 Satisfy to inverse square range	1KHz Above
1.1.4 Integrated Isolation Ability	Frequency above 315Hz $Leq \geq 50$ dB SPL Use the GRAS 46AE Free-field Standard Microphone
1.1.5 Internal Noise (when outside noise ≤ 70 dB)	≤ 20 dB(A) Use the GRAS 46AE Free-field Standard Microphone

2. Test Item:

2.1 Indoor background noise ≤ 20 dBA

The number of Leq in chamber is **18.64 dB(A)** when outside noise is around 70dB





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2.2 Acoustical Isolation Ability

Frequency above 315Hz $L_{eq} \geq 50$ dB SPL

2.2.1 1/3 Octave pure tone isolation ability

FREQ[Hz]	Outside noise (dBSPL)	Inside noise (dBSPL)	Isolation (dBSPL)
100	68.3	36.94	31.36
125	67.15	29.97	37.18
160	64.88	22.86	42.02
200	62.97	23.24	39.73
250	64.19	23.49	40.7
315	63.04	20.53	42.51
400	63.42	17.14	46.28
500	63.98	16.5	47.48
630	67.03	17.28	49.75
800	66.89	15.57	51.32
1000	65.42	15.78	49.64
1250	62.62	12.74	49.88
1600	66.53	11.62	54.91
2000	62.37	11.41	50.96
2500	61.49	9.57	51.92
3150	59	7.85	51.15
4000	59.51	6.9	52.61
5000	62.82	6.06	56.76
6300	62.67	5.54	57.13
8000	62.18	4.54	57.64
10000	62.04	4.17	57.87
12500	64.26	3.79	60.47
16000	64.35	3.34	61.01
20000	63.63	3.3	60.33

$$L_{eq} = 10 \log_{10} \left[\sum_{i=1}^n f_i 10^{\frac{L_i}{10}} \right]$$

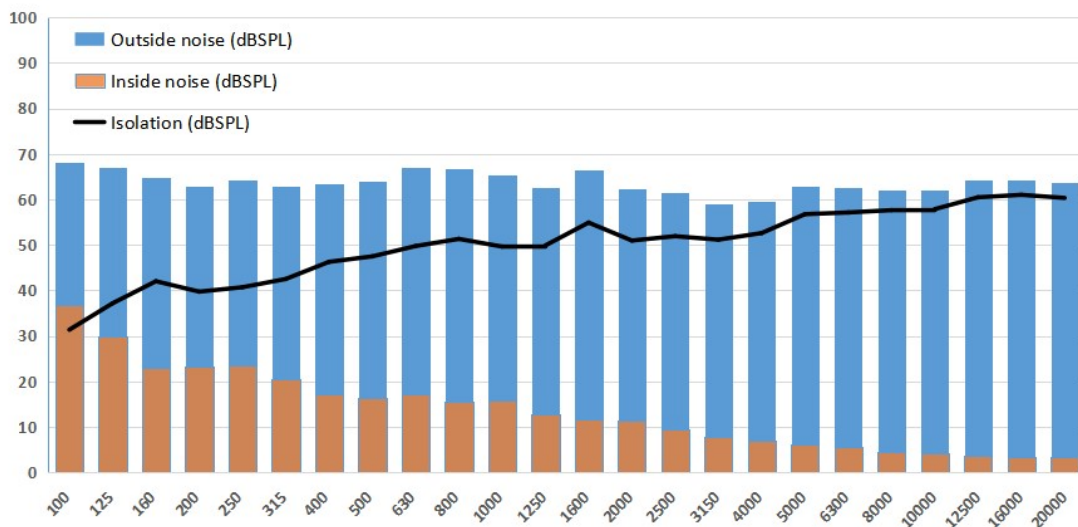
315Hz~20KHz

Outside $L_{eq} = 76.6$ dB

Inside $L_{eq} = 26.3$ dB

Isolation = 50.3dB

1/3 Octave isolation ability





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Schematic diagram of the measurement condition.

