

## Duelund Coherent Audio Monitor



## Duelund Coherent Audio 1" Precision Tweeter



### Electrical data

Nominal impedance	Zn	7 Ω
Minimum impedance/freq.	Zmir	5,9 / 3,48Ω/kHz
Maximum impedance	Zo	22,0 Ω
DC resistance	Re	4,7 Ω
Voice coil inductance	Le	0,07 mH

### T-S parameters

Resonance Frequency	fs	430,0 Hz
Mechanical Q-factor	Qms	1,10
Electrical Q-factor	Qes	0,25
Total Q-factor	Qts	0,21

Force factor	Bl	5,1 Tm
Mechanical resistance	Rms	1,3 kg/s
Moving mass	Mms	0,5 g
Suspension compliance	Cms	0,26 mm/N

Effective piston area	Sd	9 cm <sup>2</sup>
Equivalent volume	Vas	0,0 ltrs

Voltage sensitivity 1.0m/2.83Volt	92,0 dB
Average 3000-10000Hz	

### Voice coil and motor

Voice coil diameter	28,0 mm
Voice coil length	3,3 mm
Voice coil layers	2
Height of gap	2,5 mm
Linear excursion :	0,4 mm
Max. excursion ±	1,5 mm

Diameter of magr	70 mm
Height of magnet	4 mm
Weight of magnet	0,09 kg
Net weight	0,43 kg

### Power handling

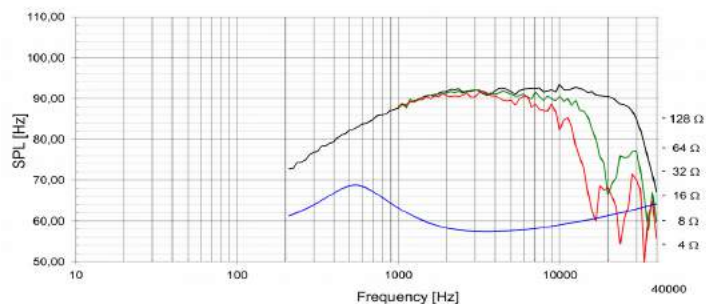
100 h RMS noise test (IEC)	150 W
Long term max. system power	450 W
IEC 268-5 noise signal is used for the power	

### Remarks Power Handling

Filter: 2. order HP Butterworth, 2,5 kHz

### Special remarks

Wood rear chamber
Neodymium magnet
Titanium voice coil former



## Duelund Coherent Audio 8" Precision Audio Driver



### Electrical data

Nominal impedance	Zn	8 Ω
Minimum impedance/freq.	Zmir	6,5 / 224 Ω/Hz
Maximum impedance	Zo	70,5 Ω
DC resistance	Re	5,8 Ω
Voice coil inductance	Le	0,46 mH

### T-S parameters

Resonance Frequency	fs	25,3 Hz
Mechanical Q-factor	Qms	3,31
Electrical Q-factor	Qes	0,24
Total Q-factor	Qts	0,22
Force factor	Bl	8,8 Tm
Mechanical resistance	Rms	1,0 kg/s
Moving mass	Mms	20,4 g
Suspension compliance	Cms	1,94 mm/N

Effective piston area	Sd	227 cm <sup>2</sup>
Equivalent volume	Vas	139,9 ltrs

Voltage sensitivity 1m/2.83Volt	90,6 dB
Average 300-1000Hz	

### Voice coil and motor

Voice coil diameter	42,0 mm
Voice coil length	19,0 mm
Voice coil layers	2
Height of gap	10,0 mm
Linear excursion ±	4,5 mm
Max. excursion ±	12,0 mm

Diameter of magnet	121 mm
Height of magnet	48 mm

### Power handling

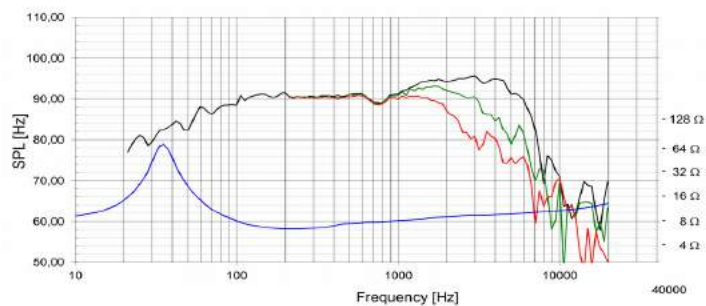
100 h RMS noise test (IEC)	100 W
Long term max system power (IEC)	160 W
IEC 268-5 noise signal is used for the power test.	

### Remarks Power Handling

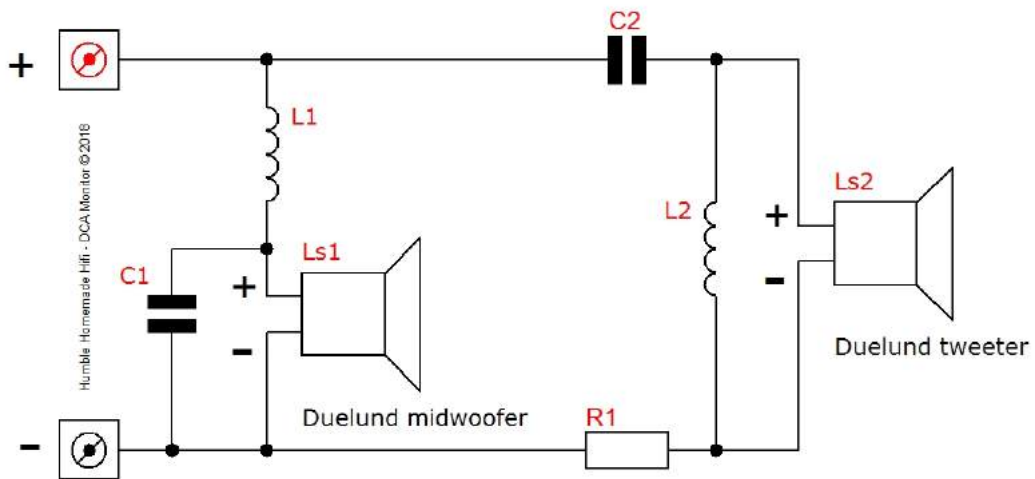
(none)

### Special remarks

Freq. x3 Imp. 2nd. 3rd. 300-1000Hz 90.6dB/1m/2.83Volt  
 21W/8554T02 11/13-17  
 320LTR, BOFF56H1, 21W, mr1  
 S0542 LAB REF  
 SN 23



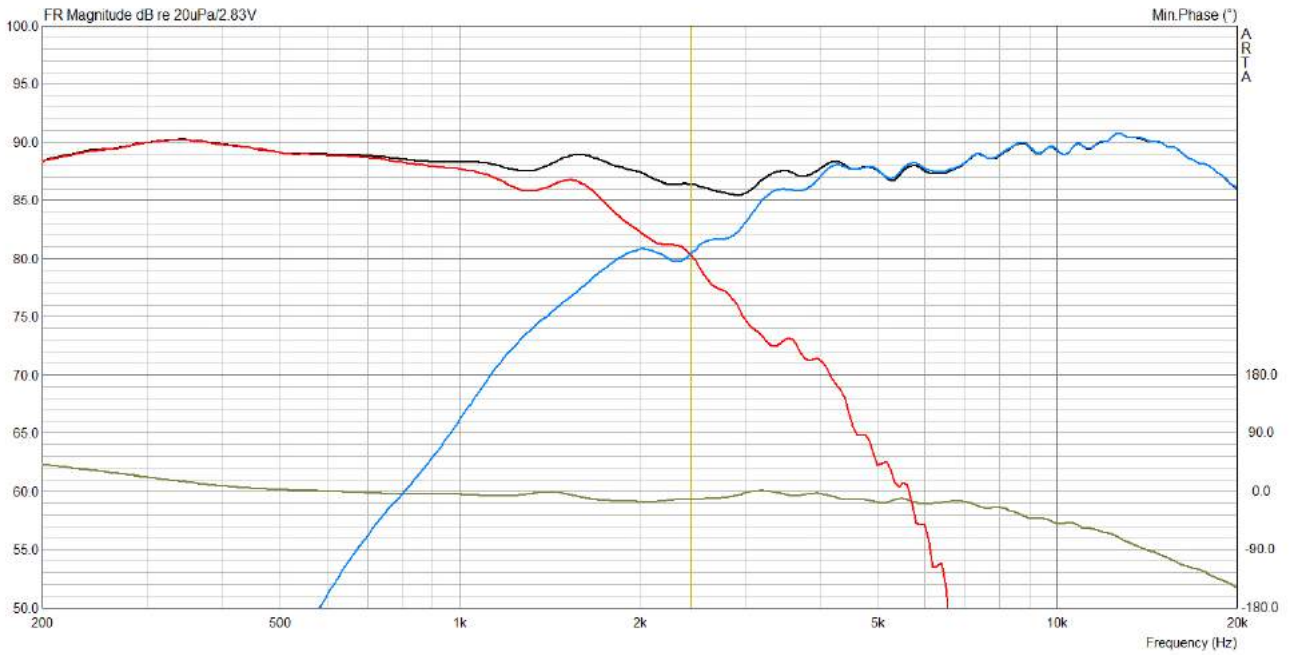
### Crossover Schematic



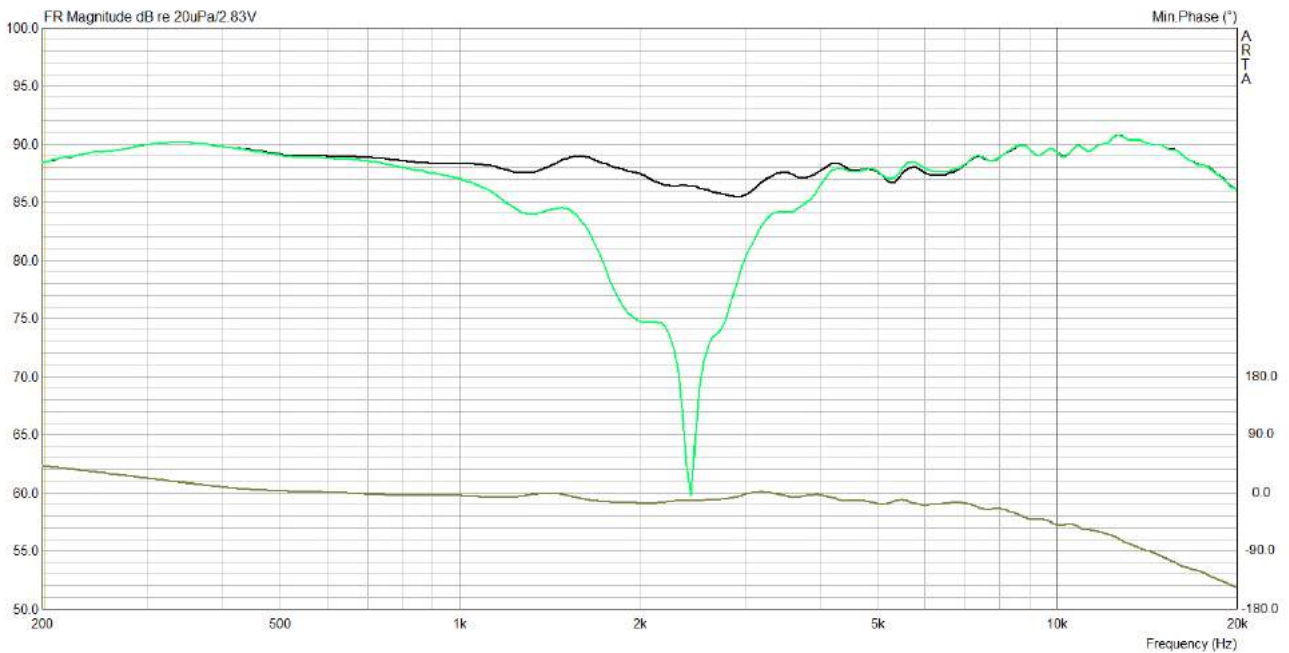
- L1 = 2,85mH / 0,35 ohms Copper Foil Inductor 12AWG
- L2 = 0,31mH / 0,10 ohms Copper Foil Inductor 12AWG
- C1 = 10uF / 100VDC Copper Foil Capacitor
- C2 = 4,7uF / 100VDC Copper Foil Capacitor
- R1 = 3,3 ohms / 10 watts resistor



## Measurements

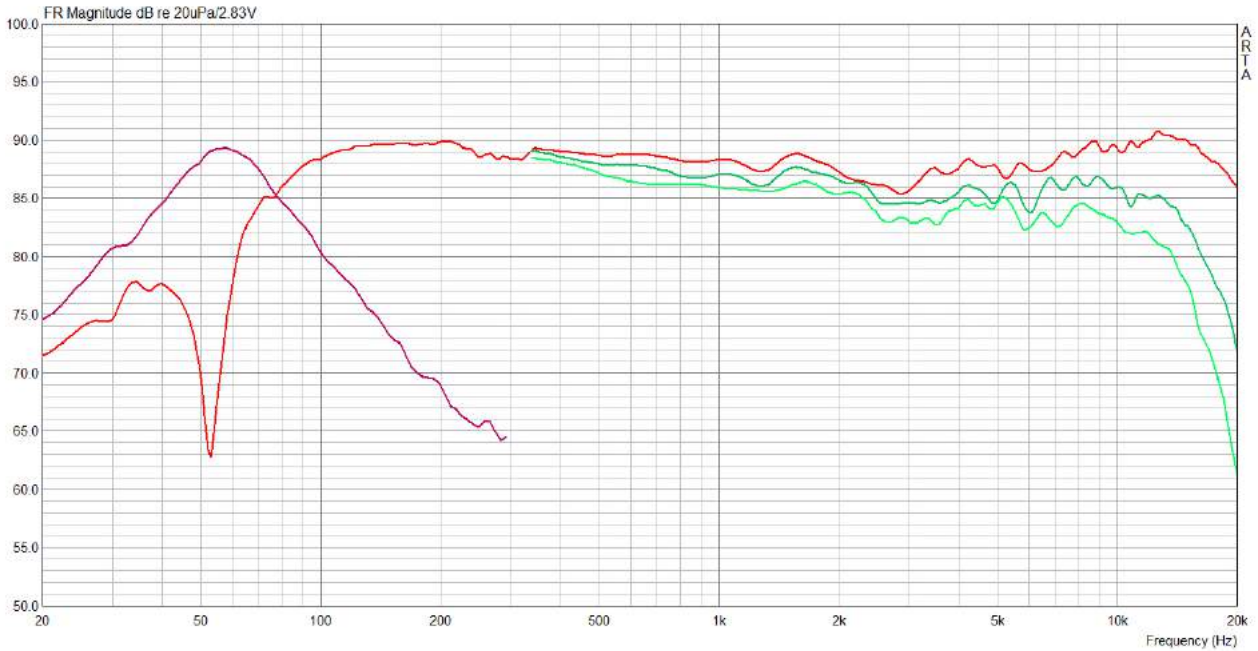


System frequency response - woofer with crossover (red) and tweeter with crossover (blue).  
SPL @ 1 meter / 2,83V - range 200Hz to 20kHz. Horizontal scale 50dB to 100dB with 1dB sub-divisions.

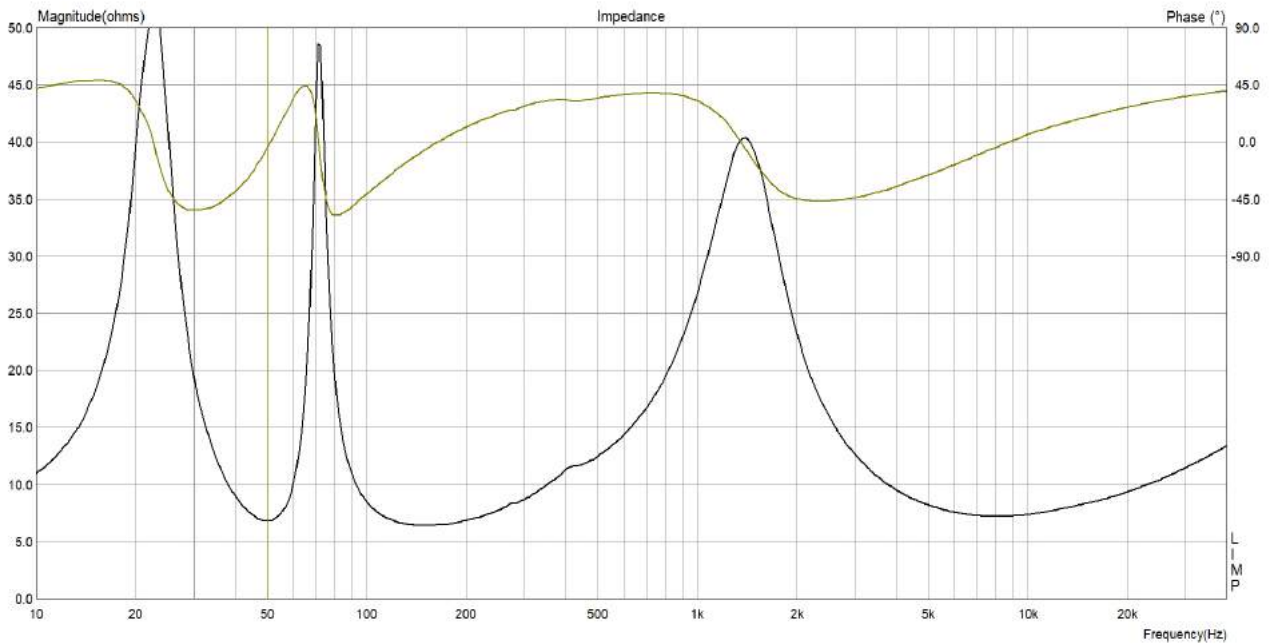


System frequency response - reversed polarity (green).  
SPL @ 1 meter / 2,83V - range 200Hz to 20kHz. Horizontal scale 50dB to 100dB with 1dB sub-divisions.

## Measurements

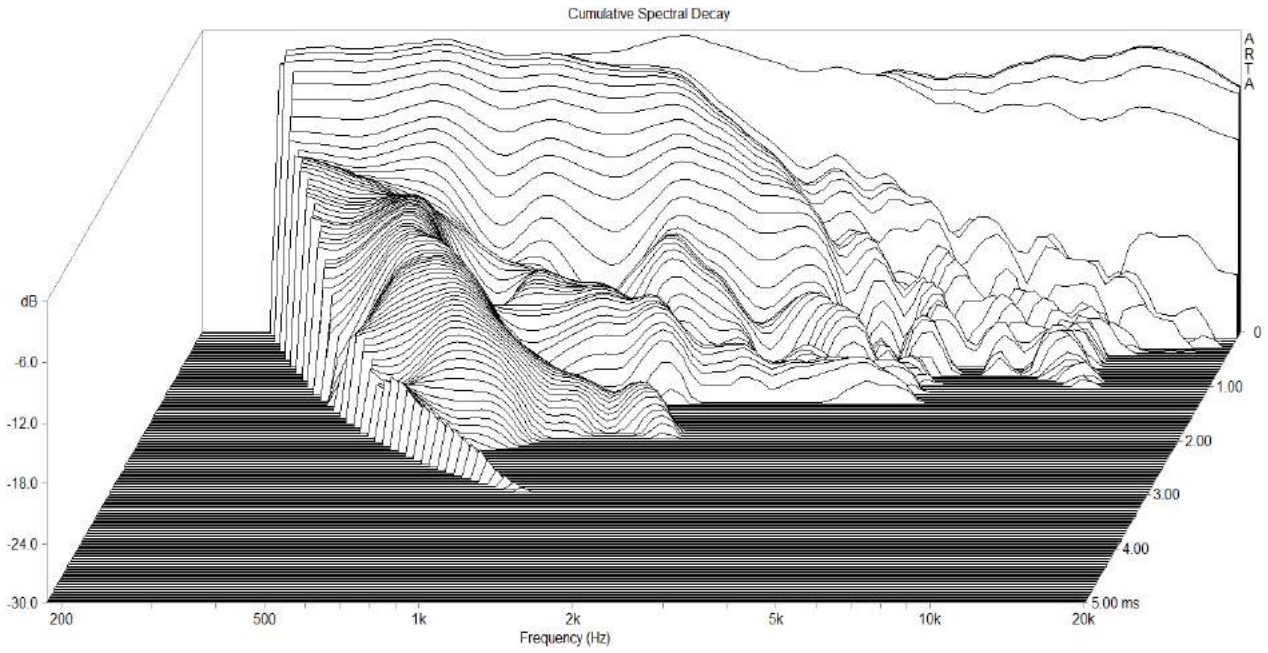


Frequency response: port (purple) / system on-axis (red) / 15° off-axis (dark green) / 30° off-axis (light green). Range 20Hz to 20kHz. Low frequency near-field response scaled for 1 meter / 2,83V and merged @ 340Hz.

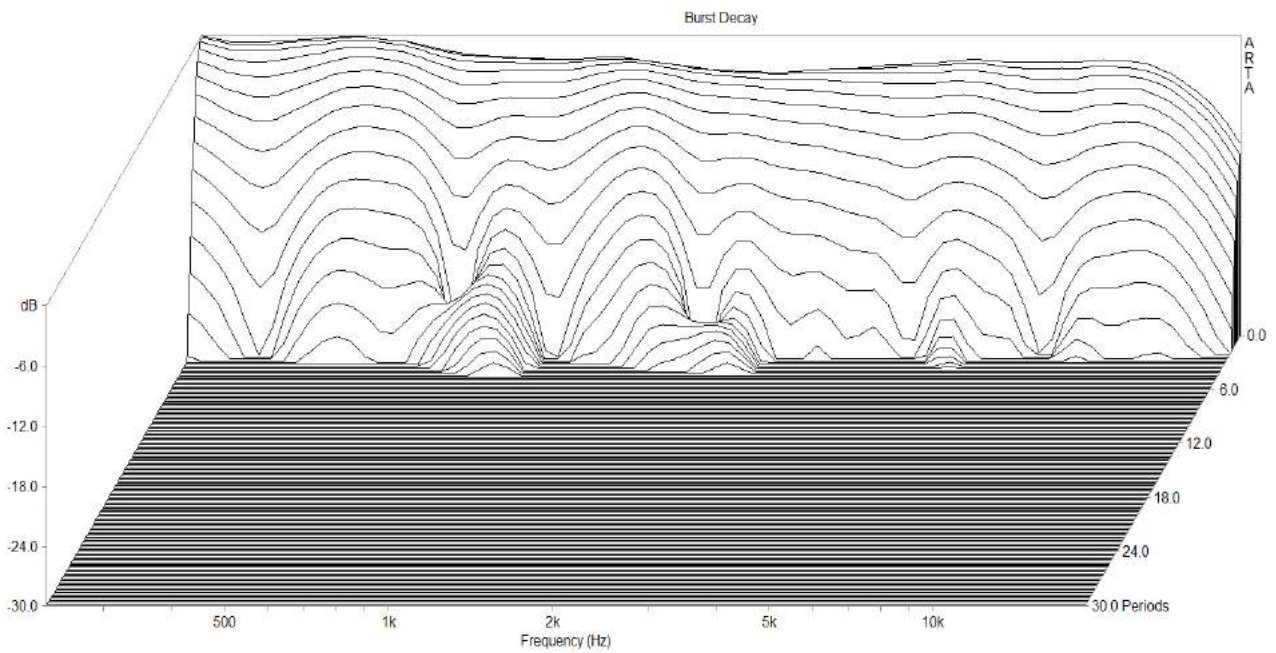


System impedance curve - range 10Hz to 40kHz. Nominal impedance 8 ohms. Impedance minimum 6,4 ohms @ 150Hz. Port tuning frequency 50Hz.

## Measurements

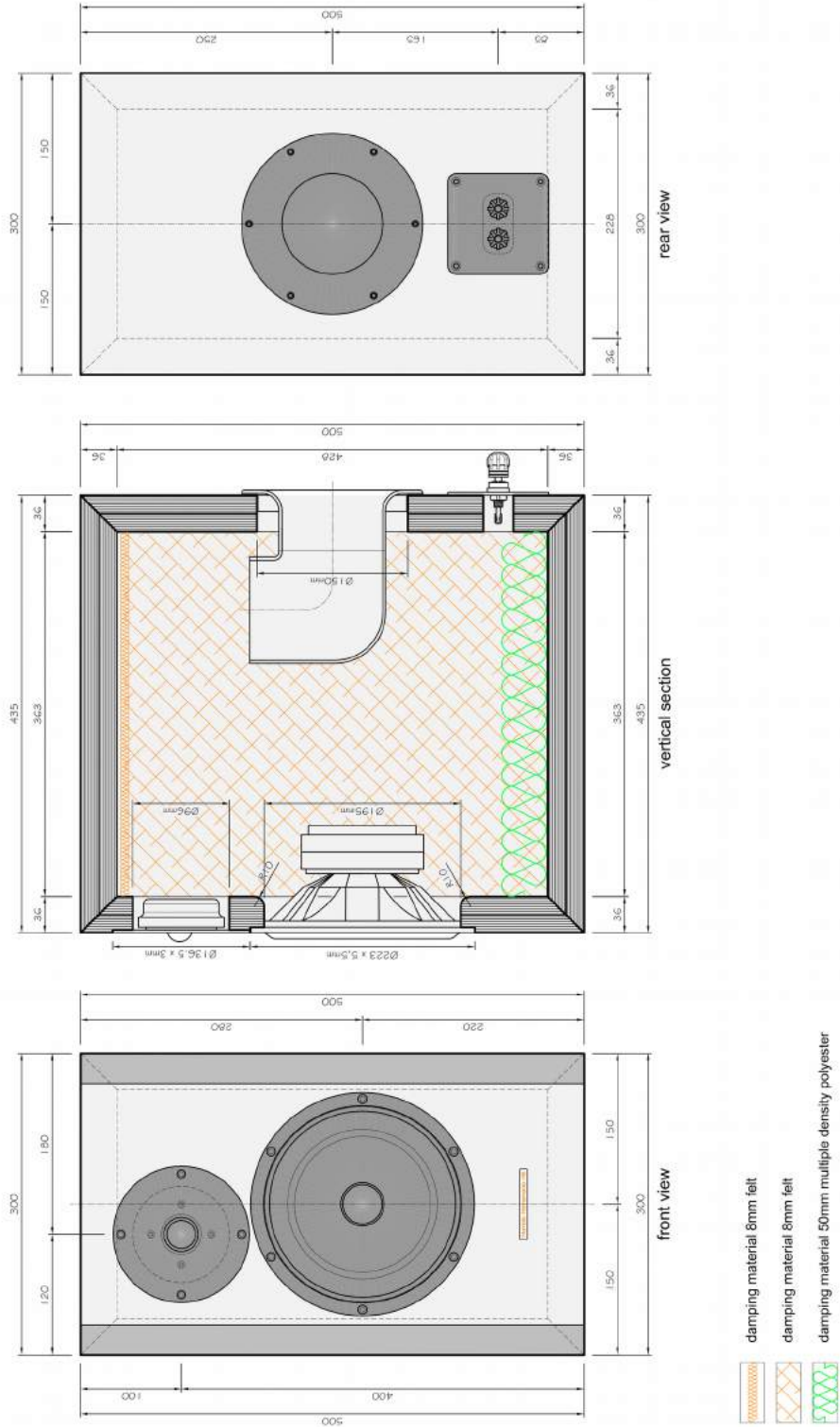


Cumulative Spectral Decay range 200Hz to 20kHz.  
Decay time scale 5 milliseconds - Decay level -30dB's.



Burst Decay range 200Hz to 20kHz.  
Decay time scale 30 periods - Decay level -30dB's.

CAD drawing





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