Duelund Coherent Audio Monitor

Duelund Coherent Audio 1" Precision Tweeter

Electrical data

Nominal impedance	Zn	7 Ω
Minimum impedance/freq.	Zmir	5,9 / 3,4Ω/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 cm²
Equivalent volume	Vas	0,0 ltrs
Voltage sensitivity 1.0m/2.83Volt Average 3000-10000Hz		92,0 dB

Voice coil and motor

Voice coil diamet	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 powe	450 W

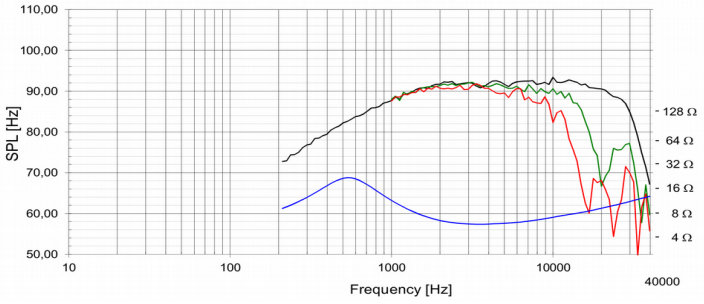
IEC 268-5 noise signal is used for the power

Remarks Power Handling

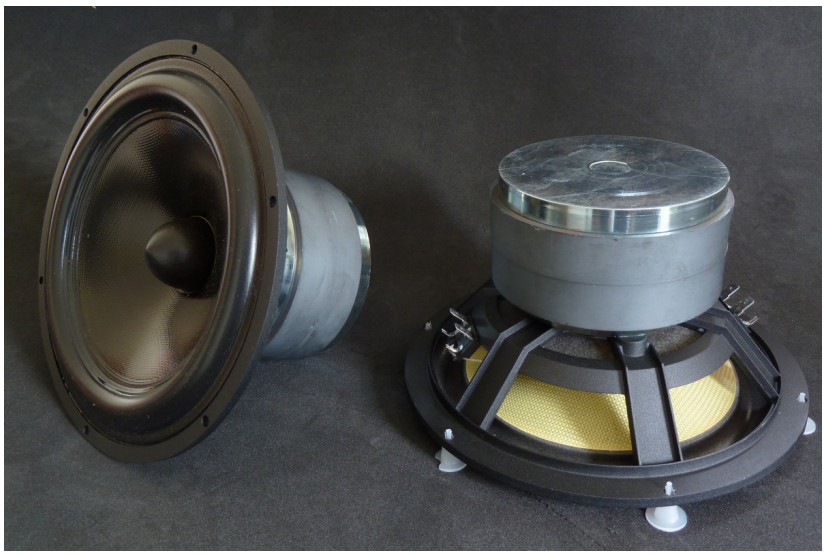
Filter: 2. order HP Butterworth, 2,5 kHz

Special remarks

Wood rear chamber
Neodynium 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	cm²
Equivalent volume	Vas	139,9	ltrs
Voltage sensitivity 1m/2.83Volt Average 300-1000Hz		90,6	dB

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 magne	121	mm
Height of magnet	48	mm

Power handling

100 h RMS noise test (IEC)	100	W
Long term max system power (I	160	W

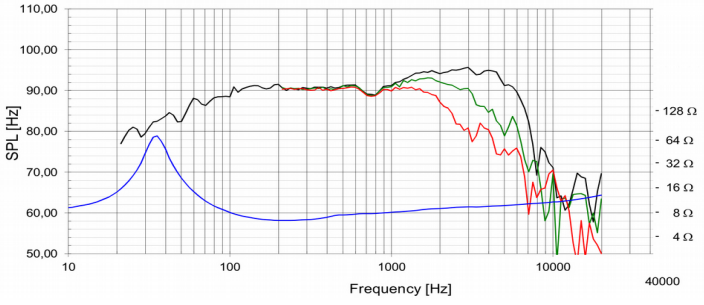
IEC 268-5 noise signal is used for the power test.

Remarks Power Handling

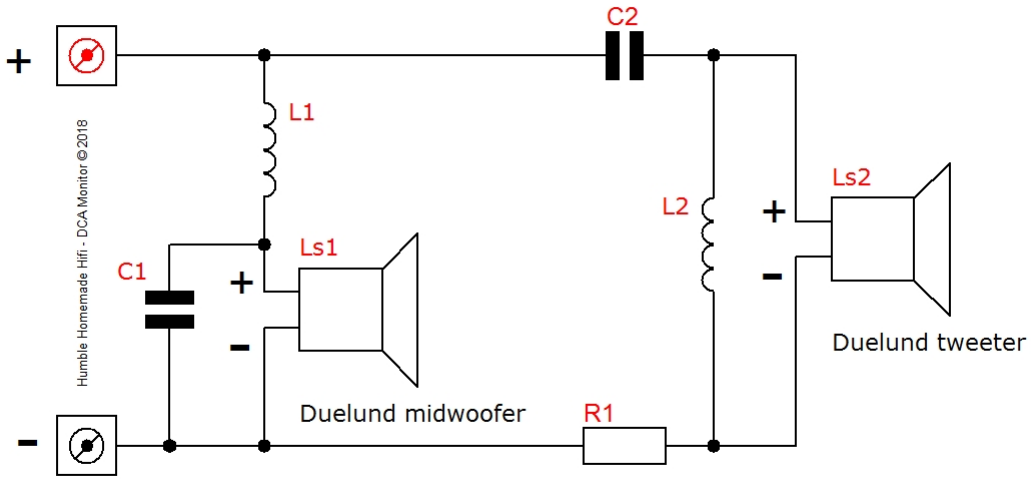
(none)

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

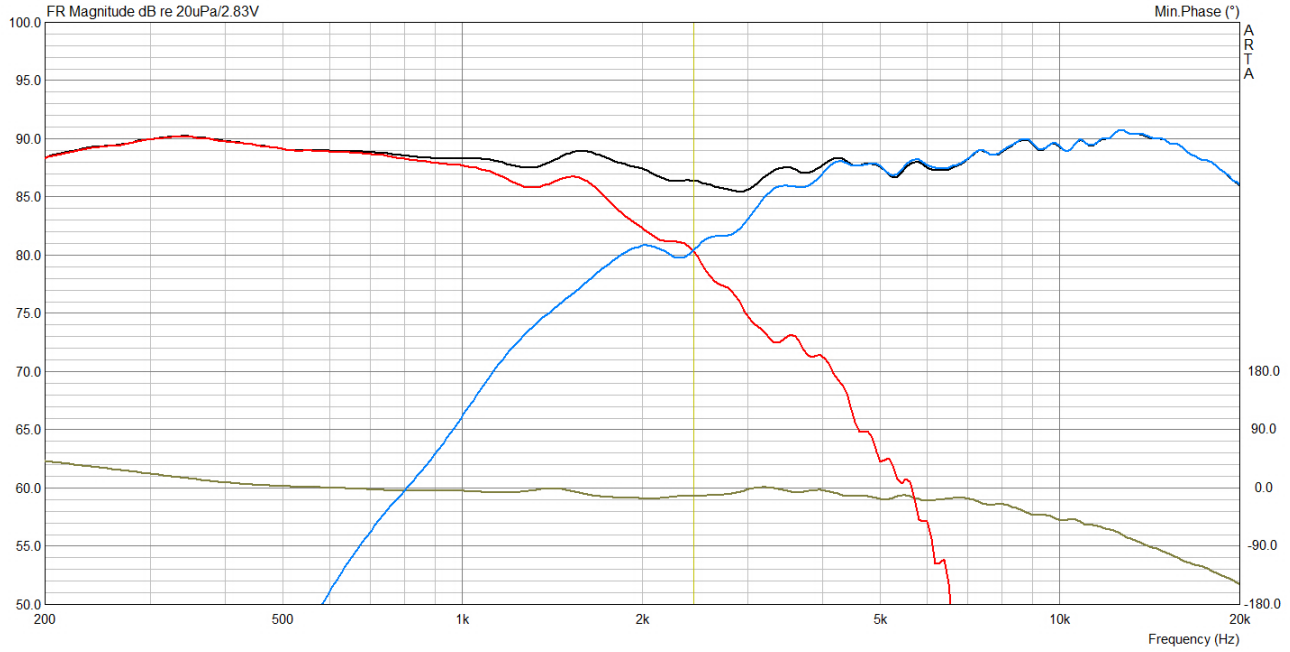


Crossover Schematic

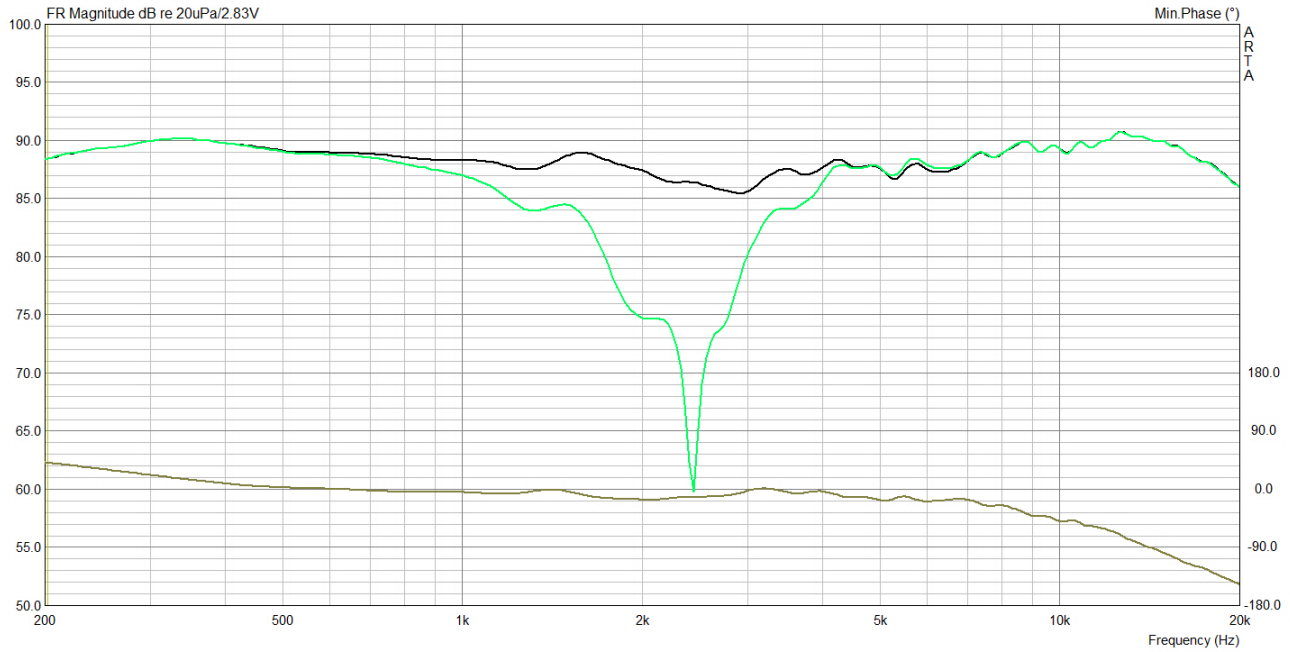


L1 = 2,85mH / 0,35 ohms Copper Foil Inductor 12AWG
L2 = 0,31mH / 0,10 ohms Copper Foil Inductor 12AWG
C1 = 10uF / 100VDC Copper Foil Capacitor
C2 = 4,7uF / 100VDC Copper Foil Capacitor
R1 = 3,3 ohms / 10 watts resistor

Measurements

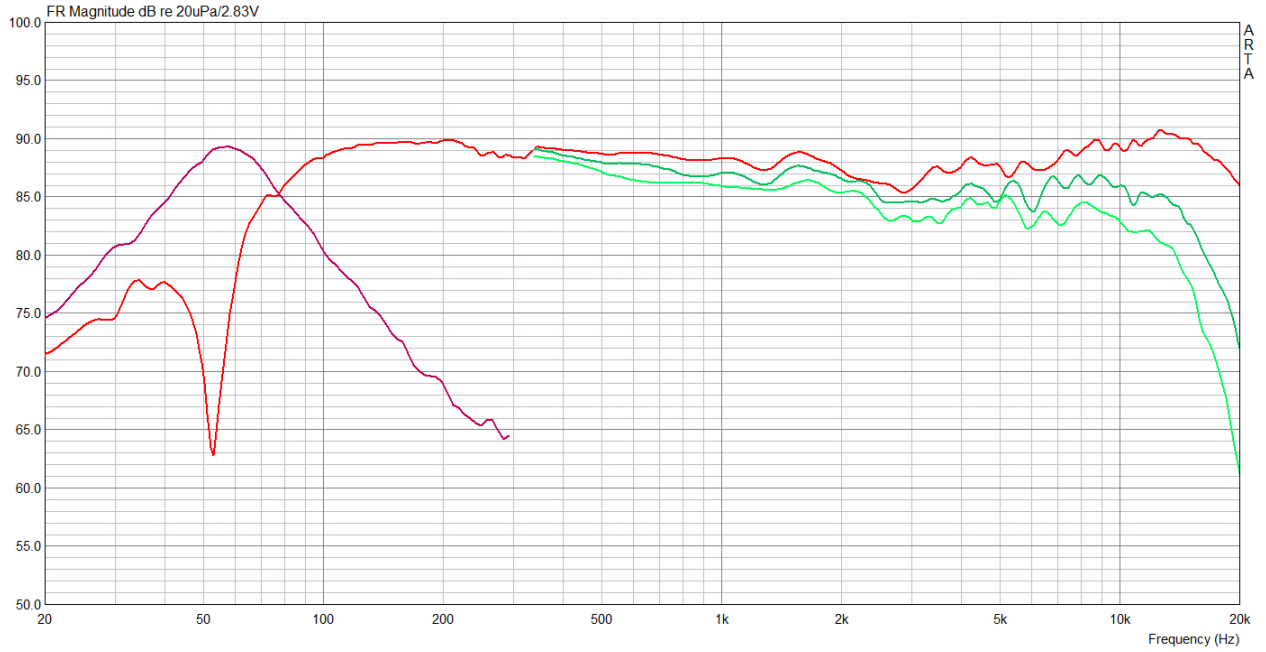


System frequency response - woofer with crossover (red) and tweeter with crossover (blue).
SPL @ 1 meter / 2,83V - range 200Hz to 20kHz. Horizontal scale 50dB to 100dB with 1dB sub-divisions.

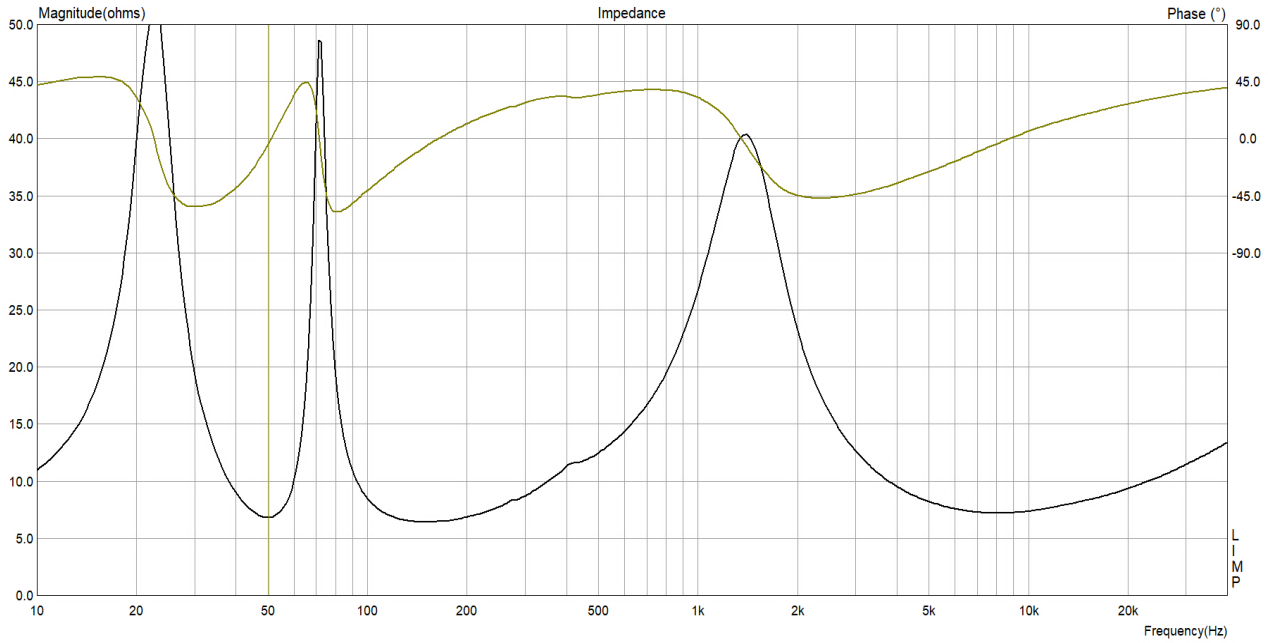


System frequency response - reversed polarity (green).
SPL @ 1 meter / 2,83V - range 200Hz to 20kHz. Horizontal scale 50dB to 100dB with 1dB sub-divisions.

Measurements

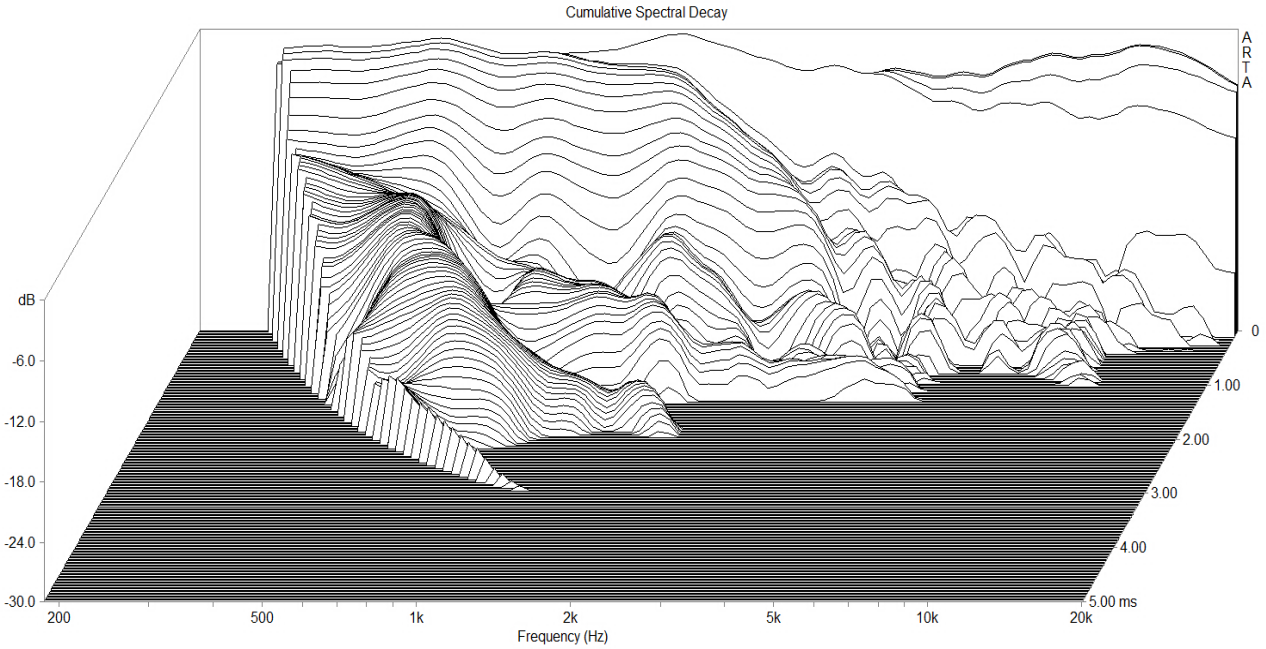


Frequency response: port (purple) / system on-axis (red) / 15° off-axis (dark green) / 30° off-axis (light green). Range 20Hz to 20kHz. Low frequency near-field response scaled for 1 meter / 2,83V and merged @ 340Hz.

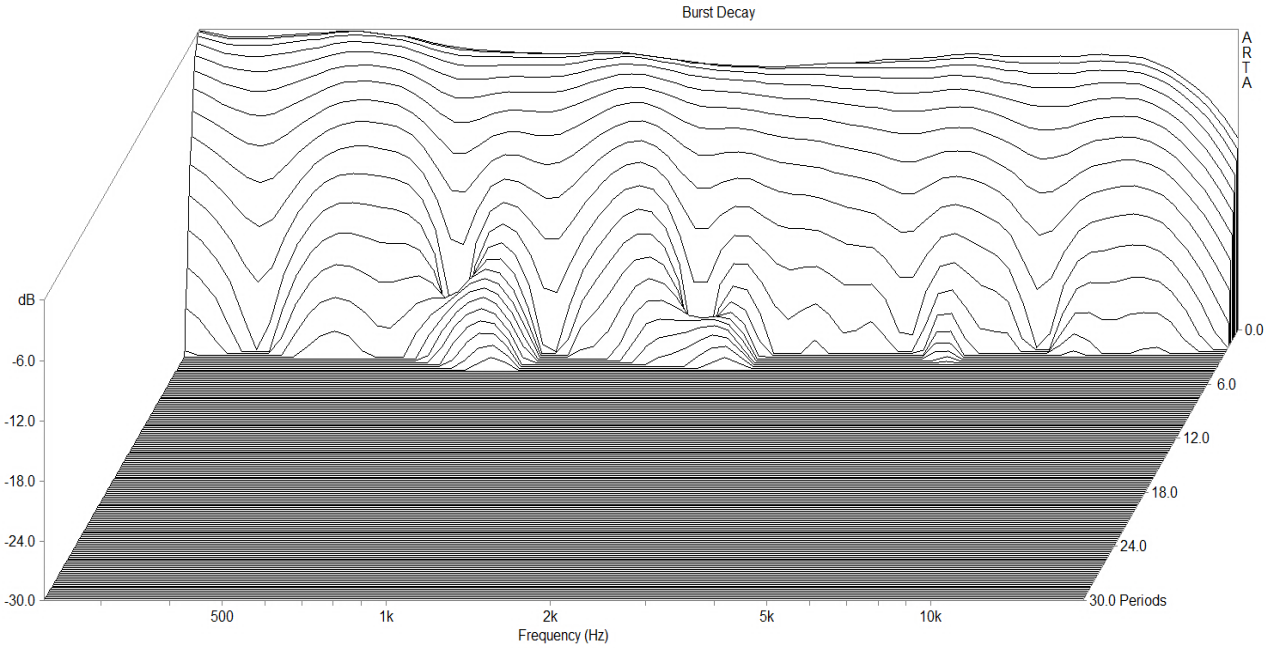


System impedance curve - range 10Hz to 40kHz. Nominal impedance 8 ohms. Impedance minimum 6,4 ohms @ 150Hz. Port tuning frequency 50Hz.

Measurements

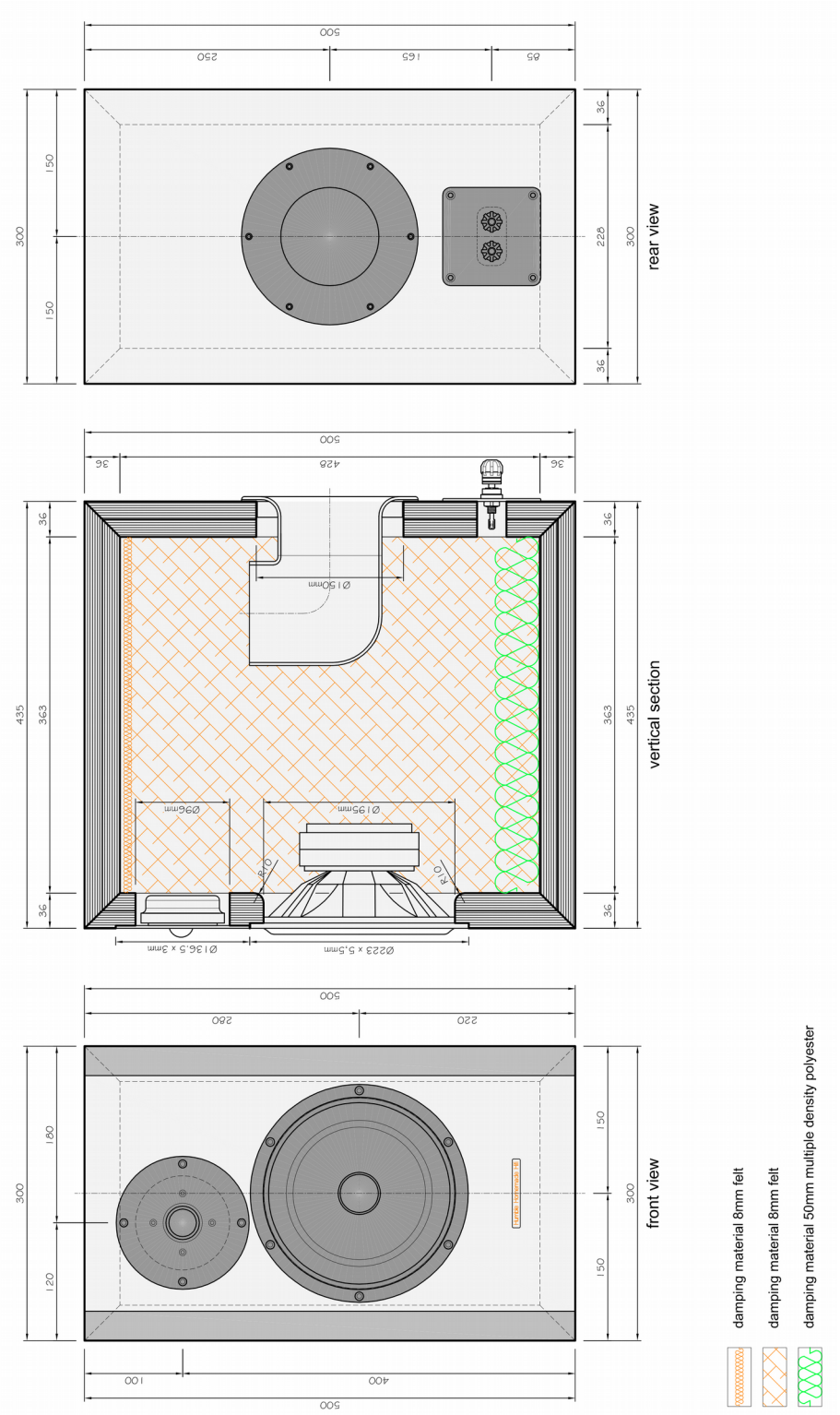


Cumulative Spectral Decay range 200Hz to 20kHz.
Decay time scale 5 milliseconds - Decay level -30dB's.



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

CAD drawing


rear view
vertical section
front view
damping material 8mm felt
damping material 8mm felt
damping material 50mm multiple density polyester

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