

Loudspeaker reference and features

Main features and using suggestions

Frequency response

Measurement equipment : MLSSA system r.10.
 MLS signal output level 2.83V,
 microphone distance : 50 cm.
 Frequency response mesured on IEC baffle,
 0° and 30° off axis.
 SPL level is computed for 1m distance,
 8 ohms impedance.

Drawing

Basket mounting dimensions in mm.

Impedance magnitude

Measurement equipment :
 Audio Precision system One, sinusoidal signal.

Simulation

Suggested box volume and tuning frequency
 for vented system.
 Computed low frequency response.

Electro-acoustical parameters

Measurement equipment : MLSSA system r.10
 with SPO (Speaker Parameter Option) software.
 Thiele and Small parameters are measured
 using added mass method.
 Additional parameters are computed
 in usual metric units.

Audiom I3 KX
1.3" Polykevlar woofer

- Thick zamak alloy metal cast frame
- Straight profile Polykevlar™ cone, large rubber surround
- Edgewound flat copper wire 77 mm voice coil, black aluminium former
- Efficiency : 91.2 dB
- Tremendous authority, superb bass response in 85 l vented systems (34 Hz -3 dB)

DRAWING

MEASUREMENTS

SPECIFICATIONS			PARAMETERS			SIMULATION		
Nominal power handling	225	W	F _s	33.3	Hz	Q _t	7	Ω
Program power handling	91.2	W	Net	127.0	Hz	F _g	1.0	Ω
Sensitivity	91.2	dB (2.0V/1m)	Q _s	0.33		Q _{ts}	0.37	
Cone	Polykevlar		Q _{ms}	0.37				
Surround	Rubber		Q _{es}	2.69	Ω			
Material impedance	8	Ω	Q _{ms}	6.3	ms			
Wt impedance	6.2	Ω	S _d	530.9	ms			
VC diameter	77	mm	C _{ms}	9946.9	ms/N			
VC height	22	mm	N _{co}	33.7	kg/m ³			
Formar	Black Aluminium		B _{1s}	2 798.3	Ω _{ac}			
Layers	1		C _{es}	2218.6	ms/N			
Wire	Copper		M _{ms}	94.9	g			
Inductance	1.62	mH	R _{ms}	6.394	g/s			
Trace	6	mm	C _{es}	536.9	μF			
Magnet diameter & height	255 multi magnets	mm x mm	V _{as}	90.4	ml			
Magnet weight	253 x 12	g	Q _{ts}	0.43	Ω	V _b	85	l
Disc density	1.02	T	β ₁	14.3	dB	F _s	31.4	Hz
Cop height	12	mm	SPL	14.6	dB	F ₃	33.6	Hz
Net weight	15	kg		91.0	dB/W/m			

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Loudspeaker specifications

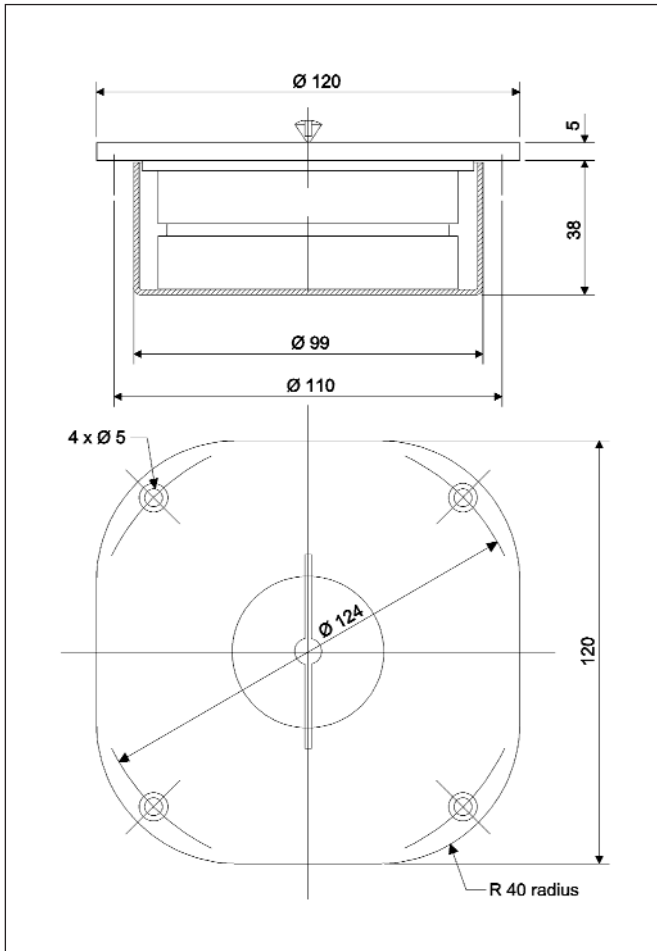
Driver technical specifications.
 Components characteristics : cone, voice-coil,
 magnet.

AUDIOPHILE SERIES

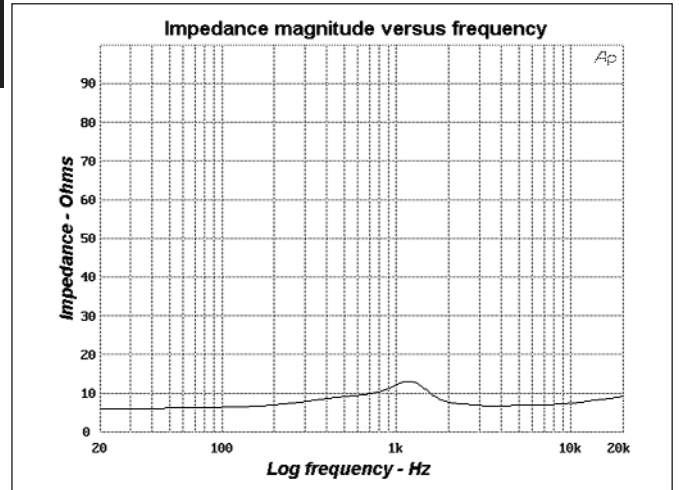
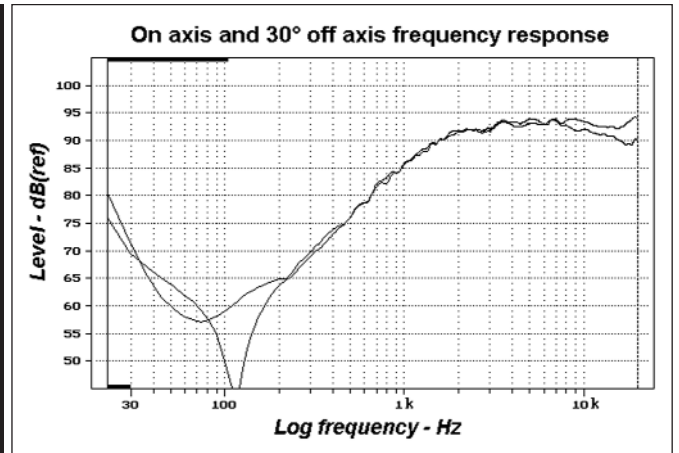
- 5 mm thick zamak alloy metal front plate
- Super high Young modulus Dioxide coating on titanium dome, coated surround
- 20 mm diameter voice coil, aluminium former, ferrofluid cooled
- Efficiency : 93.5 dB
- Double magnet, tuned chamber, acoustical impedance control device (a.k.a : phase plug)



DRAWING



MEASUREMENTS



SPECIFICATIONS

Nominal power handling	15	W
Program power handling	150	W
Sensitivity	93.5	dB (2.8V/1m)
Cone	Tioxid	
Surround	Coated Foam	
Nominal impedance	8	Ω
DC resistance	6	Ω
VC diameter	20	mm
VC height	2.2	mm
Former	Aluminium	
Layers	2	
Wire	Copper	
Inductance	0.08	mH
Xmax		mm
Magnet diameter x height	85 x 15	mm x mm
Magnet weight	361	g
Flux density	1.75	T
Gap height	3	mm
Net weight	1.2	kg

PARAMETERS

Fs	1180.8	Hz
Vas		l
Qts	0.86	
Qes	1.42	
Qms	2.16	
Re	5.7	Ω
Sd		cm ²
Cas		m ² /N
Mas		kg/m ⁴
Ras		Ω.ac
Cms		m/N
Mms		g
Rms		g/s
Ces		μF
Les		mH
Res	8.6	Ω
Bl		N/A
SPL		dB/W/m

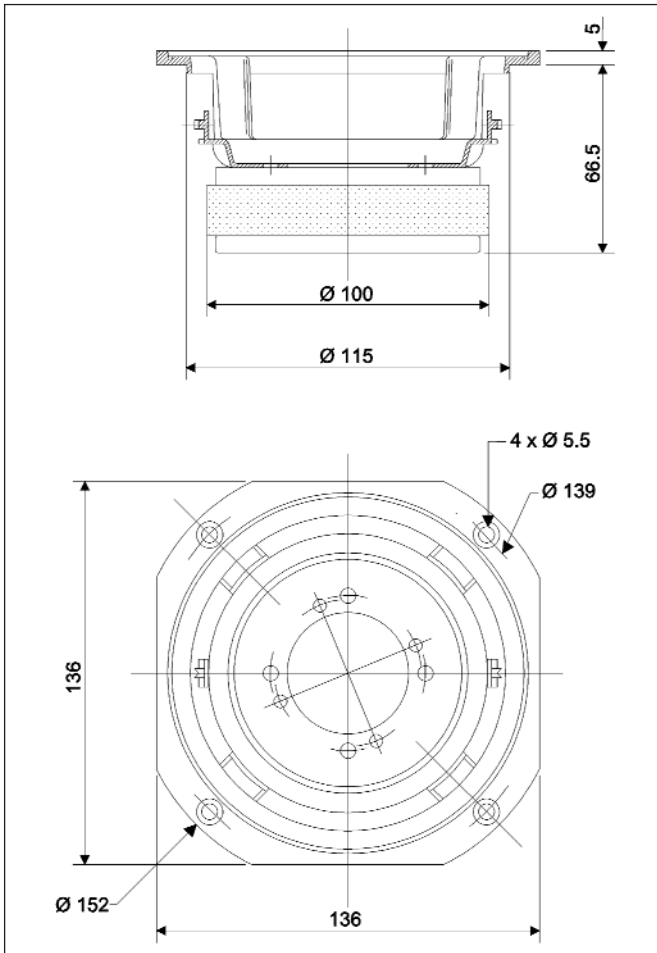
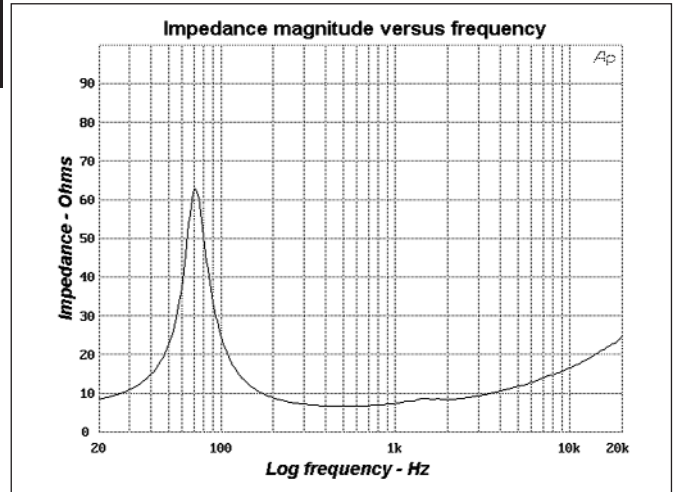
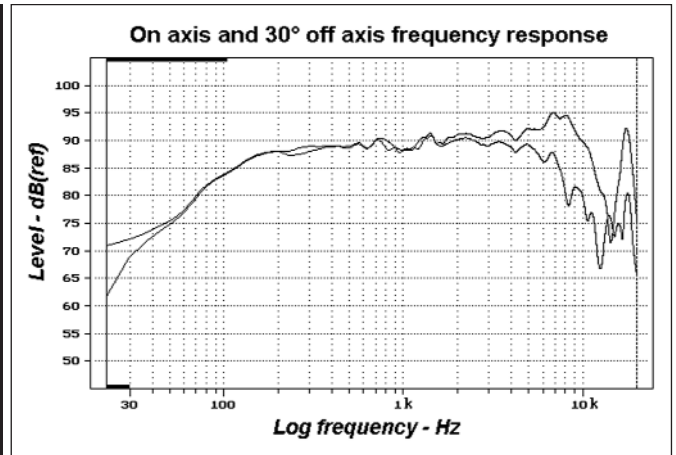
SIMULATION

Ql:		Ω
Rg:		
Qts (+Rg):		
Vb:		l
Fb:		Hz
F-3:		Hz

- Thick zamak alloy metal cast frame
- Semi exponential ultra light PolyKevlar® cone, rubber surround
- Edgewound flat aluminium wire 40 mm voice coil, Kapton™ former, phase plug
- Efficiency : 91 dB
- Very high resolution midrange, low resonance frequency

5 K 4411

5" Polykevlar® midrange


DRAWING

MEASUREMENTS

SPECIFICATIONS

Nominal power handling	70	W
Program power handling	150	W
Sensitivity	91	dB (2.8V/1m)
Cone	Polykevlar®	
Surround	Rubber	
Nominal impedance	8	Ω
DC resistance	6	Ω
VC diameter	40	mm
VC height	7	mm
Former	Kapton™	
Layers	1	
Wire	Aluminium	
Inductance	0.24	mH
Xmax	1.55	mm
Magnet diameter x height	100 x 18	mm x mm
Magnet weight	564	g
Flux density	1.06	T
Gap height	6	mm
Net weight	1.6	kg

PARAMETERS

Fs	70.7	Hz
Vas	7.7	l
Qts	0.32	
Qes	0.34	
Qms	4.27	
Re	6.1	Ω
Sd	86.6	cm ²
Cas	551E-10	m ² /N
Mas	92.2	kg/m ⁴
Ras	9 580.9	Ω .ac
Cms	734E-6	m/N
Mms	6.9	g
Rms	718	g/s
Ces	125.0	μ F
Les	40.6	mH
Res	77.0	Ω
Bl	7.4	N/A
SPL	90.9	dB/W/m

SIMULATION

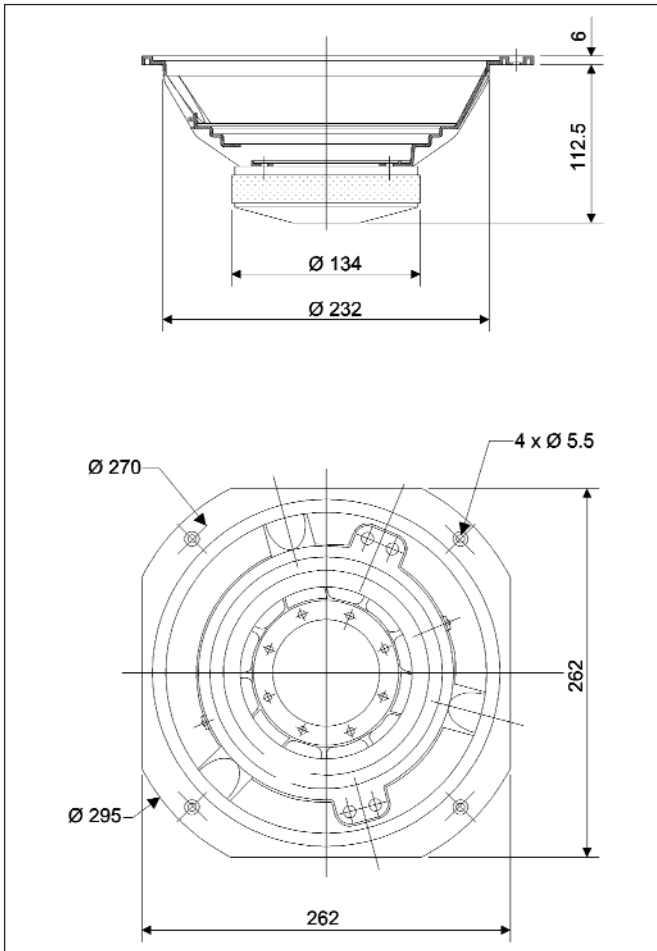
Ql:		Ω
Rg:		
Qts (+Rg):		
Vb:		l
Fb:		Hz
F-3:		Hz

AUDIOPHILE SERIES

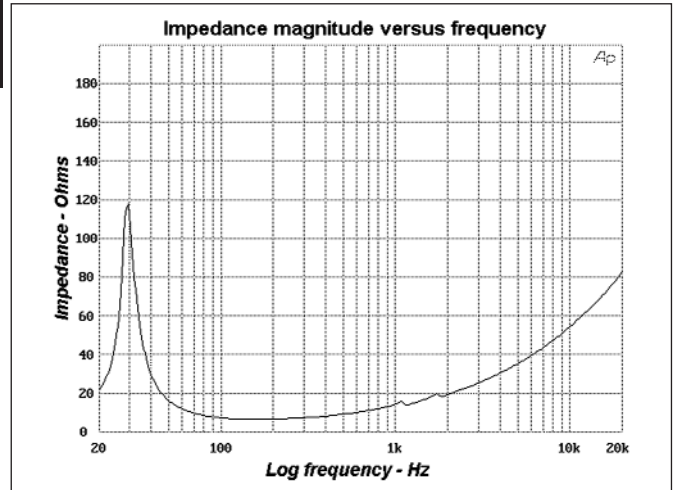
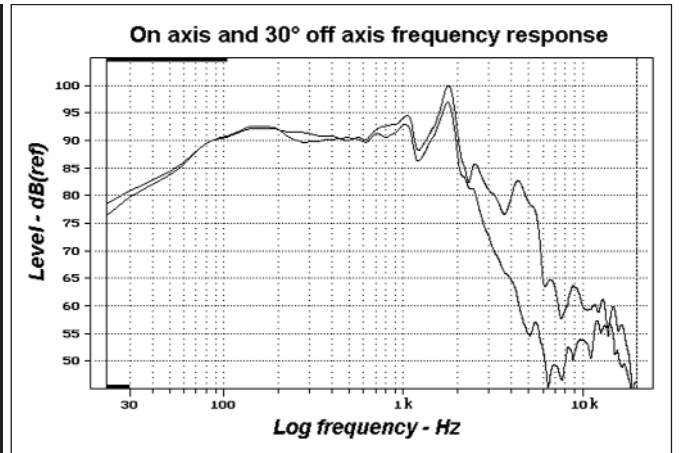
- Thick zamak alloy metal cast frame
- Straight profile PolyKevlar® cone, large rubber surround
- 2 layers edgewound flat copper wire 40 mm voice coil, Kapton™ former
- Efficiency : 92.1 dB
- Outstanding performance in small size 60 l vented systems, high impact



DRAWING



MEASUREMENTS



SPECIFICATIONS

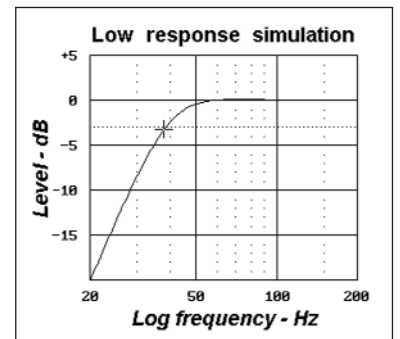
Nominal power handling	150	W
Program power handling	200	W
Sensitivity	92.1	dB (2.8V/1m)
Cone	Polykevlar®	
Surround	Rubber	
Nominal impedance	8	Ω
DC resistance	5	Ω
VC diameter	40	mm
VC height	22	mm
Former	Kapton™	
Layers	2	
Wire	Copper	
Inductance	1.42	mH
Xmax	8	mm
Magnet diameter x height	134 x 20	mm x mm
Magnet weight	1160	g
Flux density	1.25	T
Gap height	6	mm
Net weight	3.7	kg

PARAMETERS

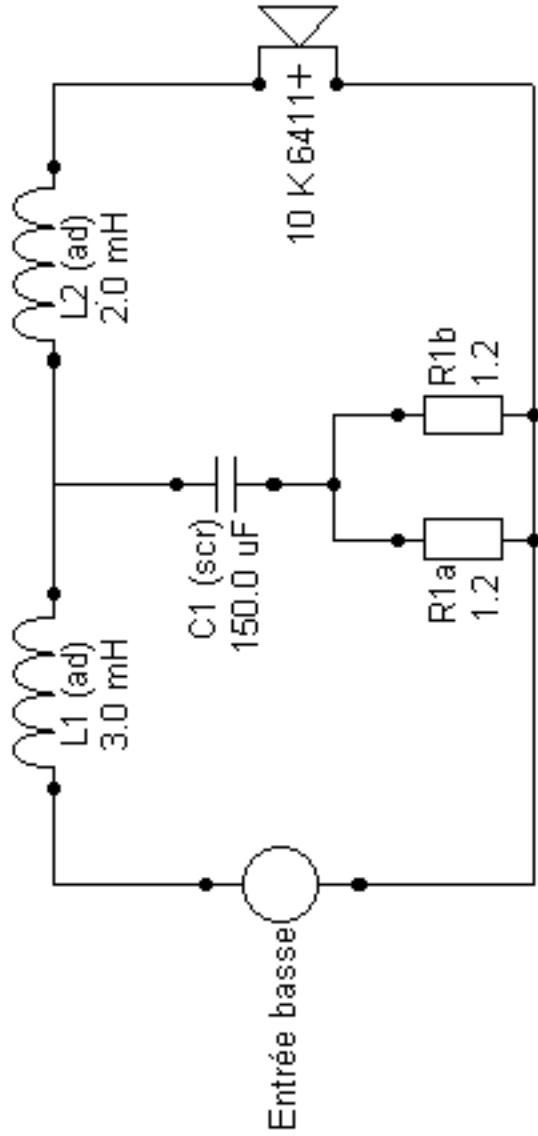
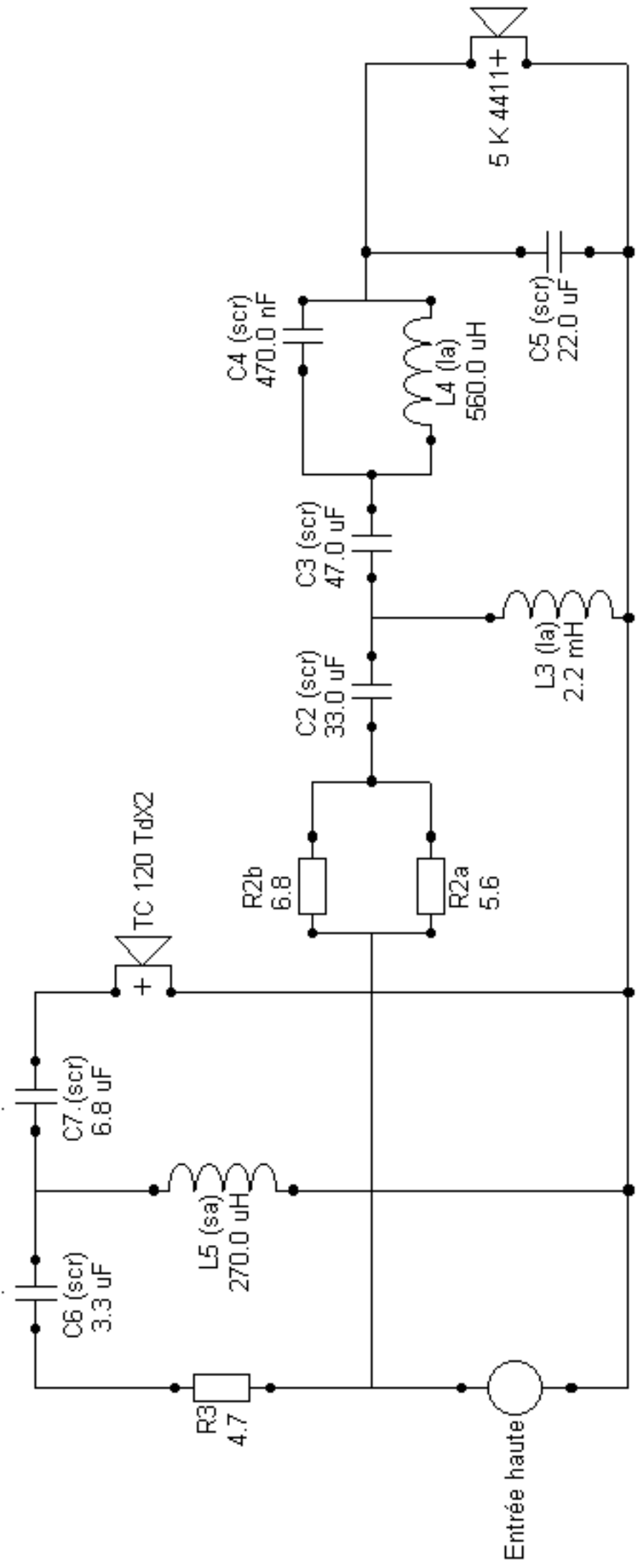
Fs	28.3	Hz
Vas	124.1	l
Qts	0.29	
Qes	0.30	
Qms	9.31	
Re	5.2	Ω
Sd	356.3	cm ²
Cas	883E-9	m ² /N
Mas	35.8	kg/m ⁴
Ras	683.8	Ω .ac
Cms	696E-6	m/N
Mms	45.5	g
Rms	868	g/s
Ces	327.0	μ F
Les	96.7	mH
Res	160.1	Ω
Bl	11.8	N/A
SPL	91.6	dB/W/m

SIMULATION

Ql:	7	Ω
Rg:	0.8	
Qts (+Rg):	0.33	



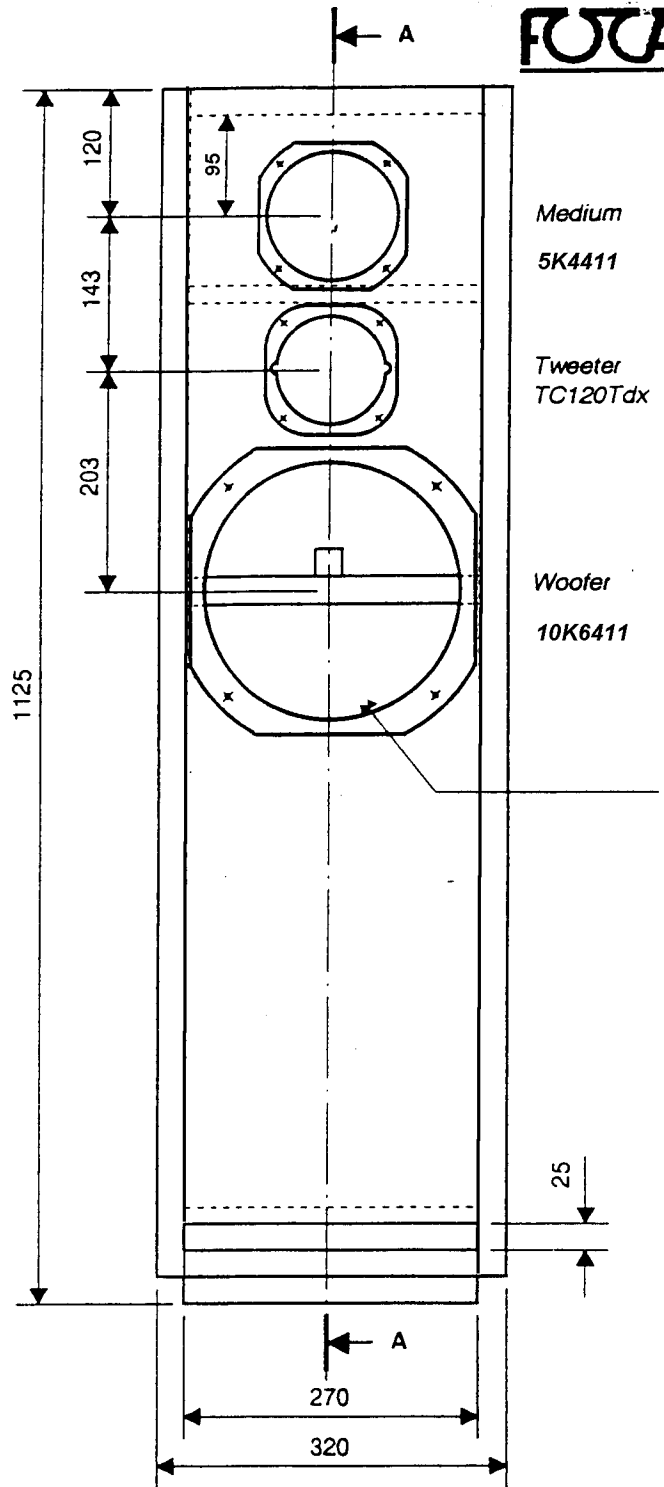
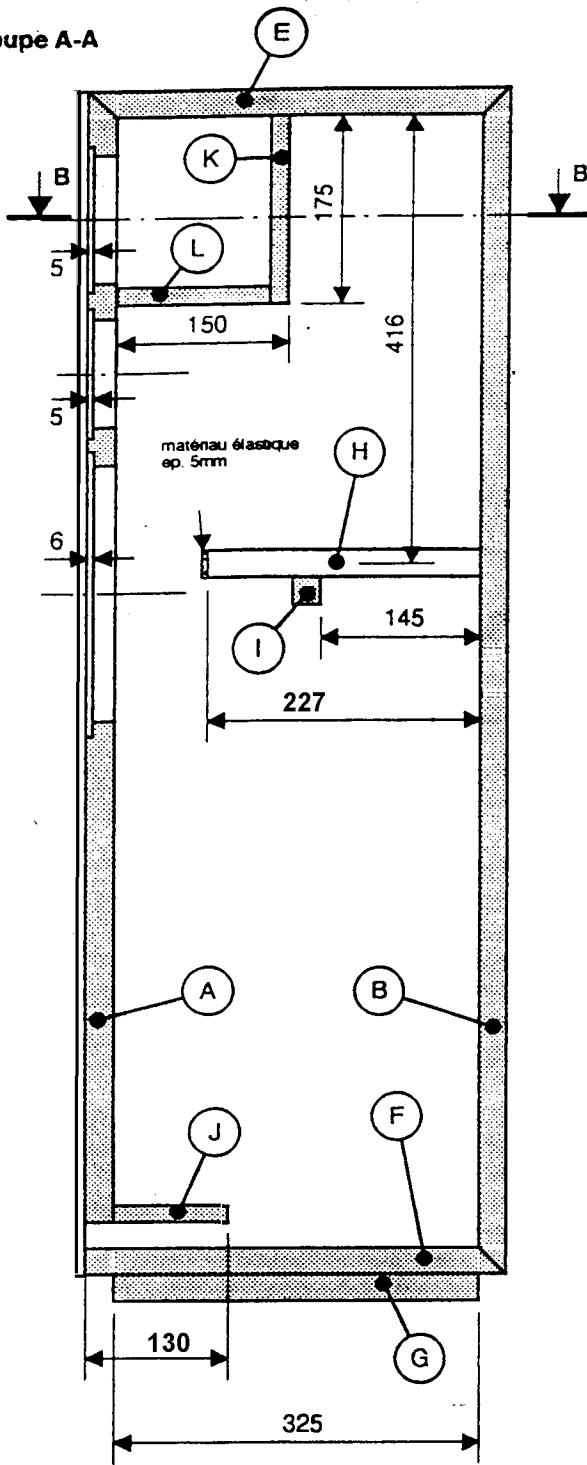
Vb:	60	l
Fb:	35.5	Hz
F-3:	37.9	Hz



Kit FOCALC800
Filtre C800 mk2

(les résistances sont en ohmes)

Coupe A-A

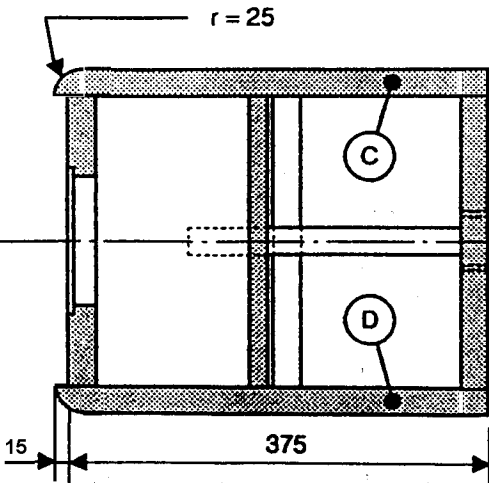


Medium
5K4411

Tweeter
TC120Tdx

Woofer
10K6411

r = 25



Coupe B-B

Dimensions des panneaux (mm)

Medium 25mm MDF:

- (A) (B) avant 270 x 1025 , arrière 270 x 1050
- (C) (D) cotés: 375 x 1100 , arrondi avant
- (E) (F) (G) haut, bas. 270 x 375 , pied 270 x 325
- (H) tasseau: 227 x 25 x 25
- (I) tasseau: 270 x 25 x 25

Medium 16mm MDF:

- (J) évent: 105 x 270
- (K) arrière médium :175 x 270
- (L) bas médium: 134 x 270.