


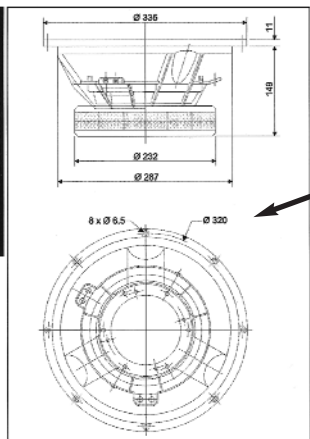
Loudspeaker reference and features
Main features and using suggestions

FOCAL COMPONENTS *Audiom series* **Audiom I3 KX**
1.3" Polykevlar woofer

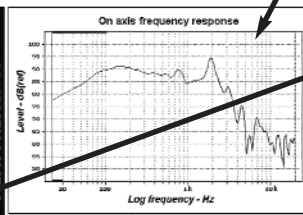
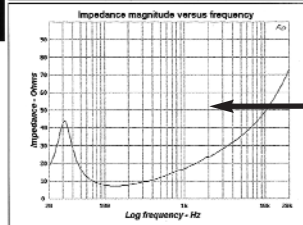


- Thick zamak alloy metal cast frame
- Straight profile Polykevlar™ cone, large rubber surround
- Edgewound flat copper wire 77 mm voice coil, black aluminium former
- Efficiency : 91.2 dB
- Tremendous authority, superb bass response in 85 l vented systems (34 Hz -3 dB)

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	Max	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	fs	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		β ₁₅	2 798.3	Ω.s			
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	l _{ms}	90.4	mH			
Magnet weight	253 x 12	g	f _{1c}	14.3	Ω			
Disc density	1.02	T	β _{1c}	14.6	SI			
Cop height	12	mm	SPL	91.0	dB/W/m			
Net weight	1.5	kg						

FOCAL S.A. - 15 rue J.C.Verpilleux - B.P. 201 - 42013 Saint-Etienne cedex 2 - FRANCE

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

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.

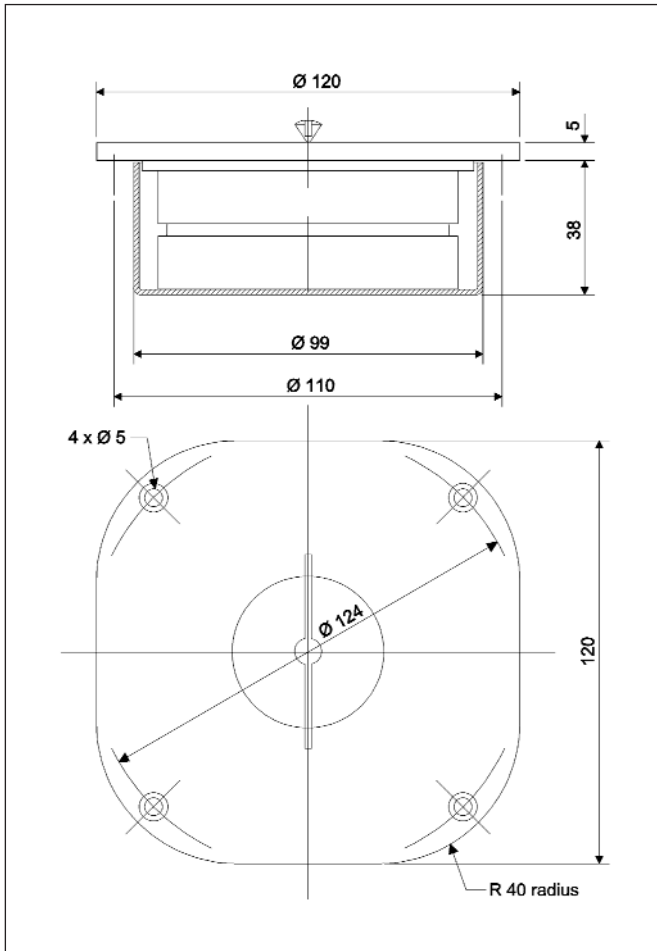
Electro-acoustical parameters
Measurement equipment : MLSSA system r.10
with SPO (Speaker Parameter Option) software.
Thiele and Small parameters are measured
using added mass method.
Additional parameters are computed
in usual metric units.

AUDIOPHILE SERIES

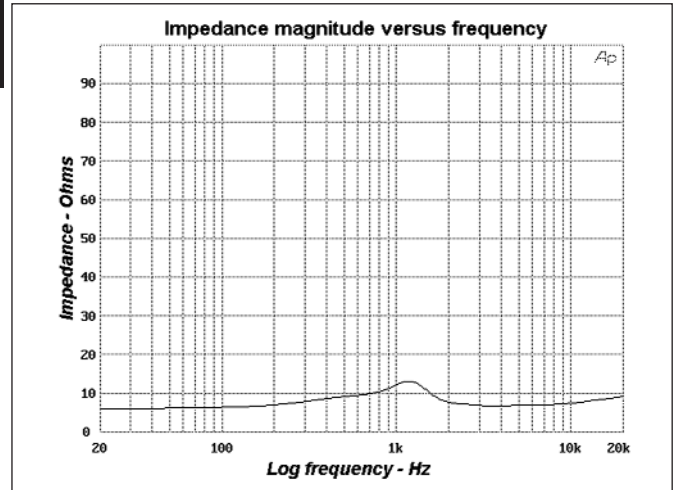
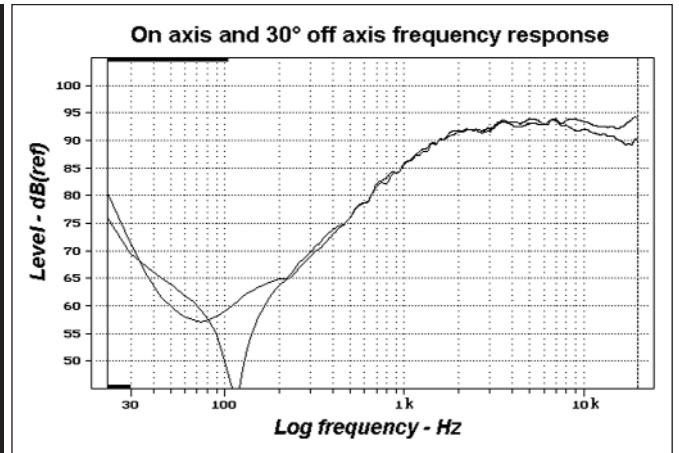
- 5 mm thick zamak alloy metal front plate
- Super high Young modulus Dioxide coating on titanium dome, coated surround
- 20 mm diameter voice coil, aluminium former, ferrofluid cooled
- Efficiency : 93.5 dB
- Double magnet, tuned chamber, acoustical impedance control device (a.k.a : phase plug)



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

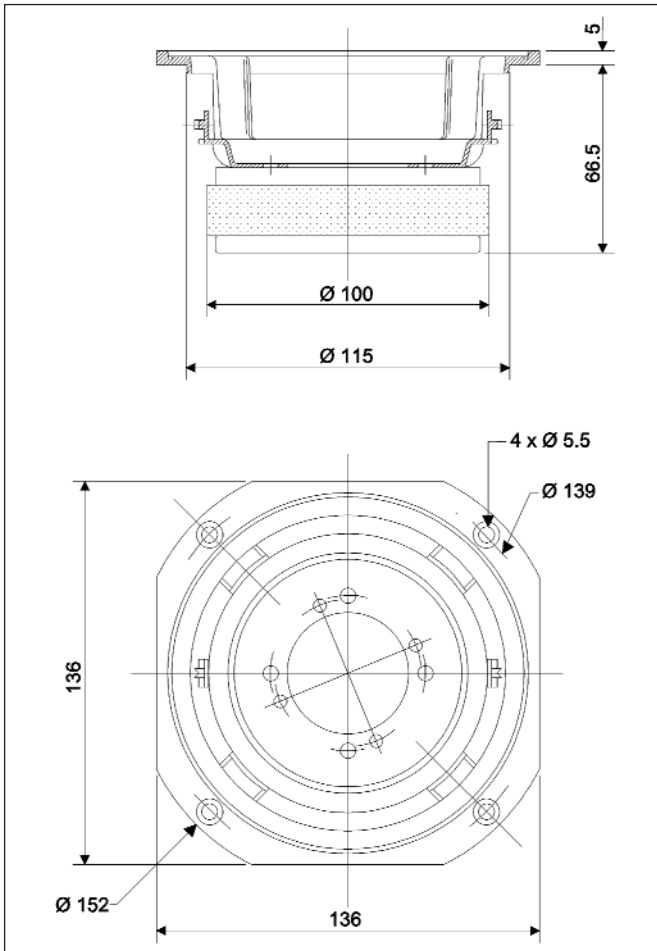
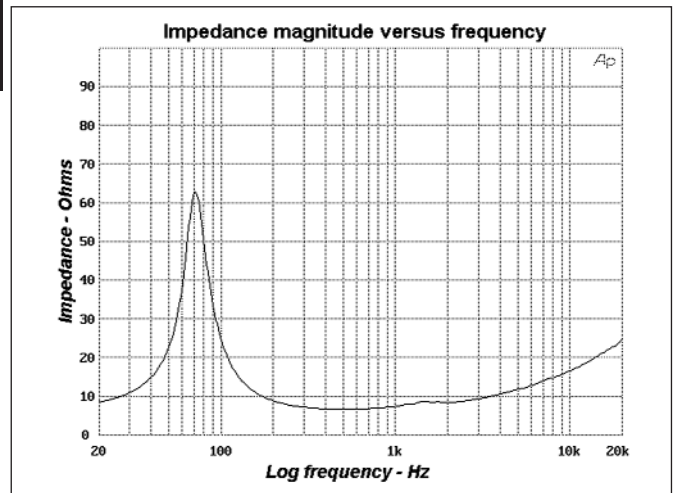
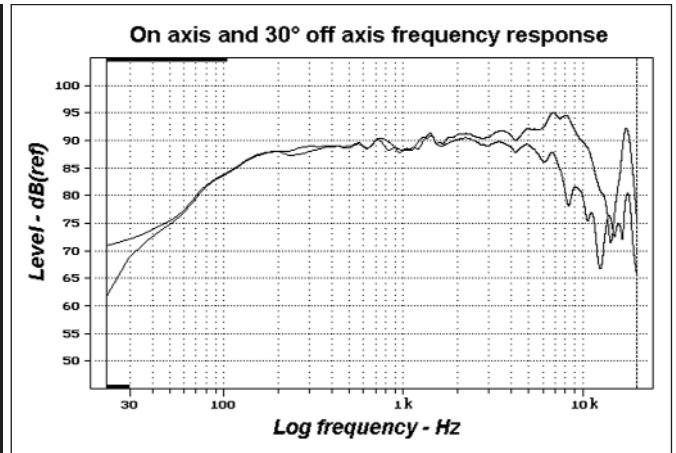
SIMULATION

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

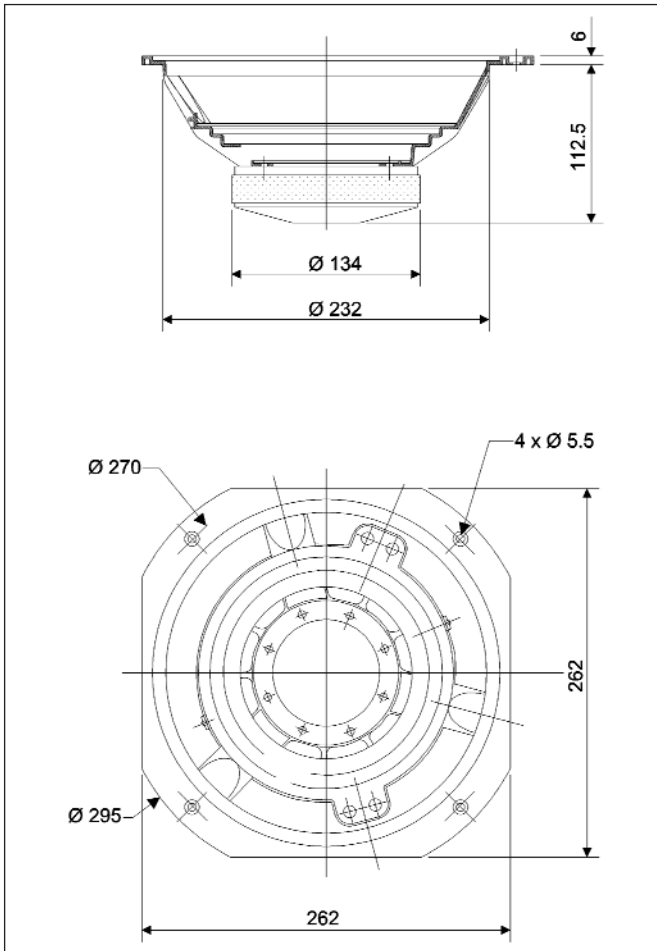
Ql:		Ω
Rg:		
Qts (+Rg):		
Vb:		l
Fb:		Hz
F-3:		Hz

AUDIOPHILE SERIES

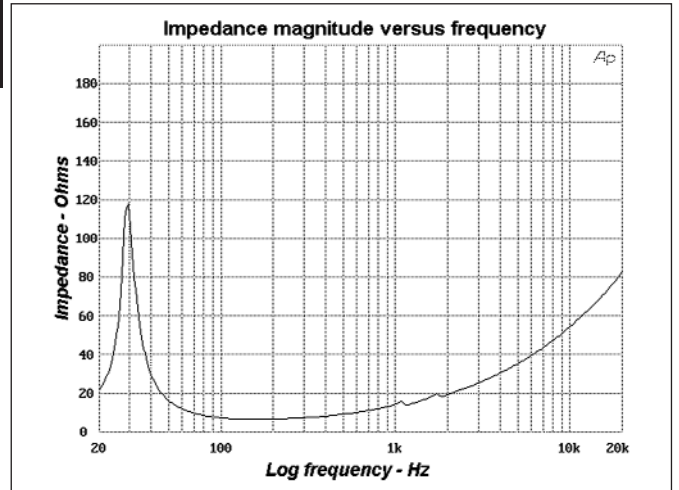
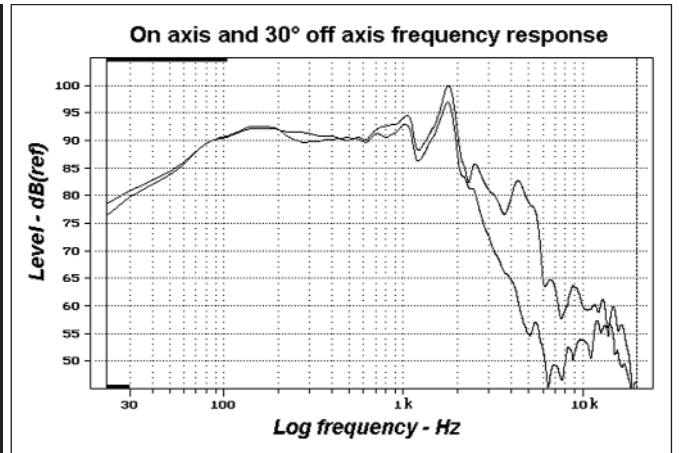
- Thick zamak alloy metal cast frame
- Straight profile PolyKevlar® cone, large rubber surround
- 2 layers edgewound flat copper wire 40 mm voice coil, Kapton™ former
- Efficiency : 92.1 dB
- Outstanding performance in small size 60 l vented systems, high impact



DRAWING



MEASUREMENTS



SPECIFICATIONS

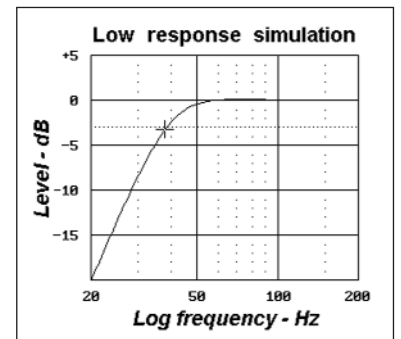
Nominal power handling	150	W
Program power handling	200	W
Sensitivity	92.1	dB (2.8V/1m)
Cone	Polykevlar®	
Surround	Rubber	
Nominal impedance	8	Ω
DC resistance	5	Ω
VC diameter	40	mm
VC height	22	mm
Former	Kapton™	
Layers	2	
Wire	Copper	
Inductance	1.42	mH
Xmax	8	mm
Magnet diameter x height	134 x 20	mm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

PARAMETERS

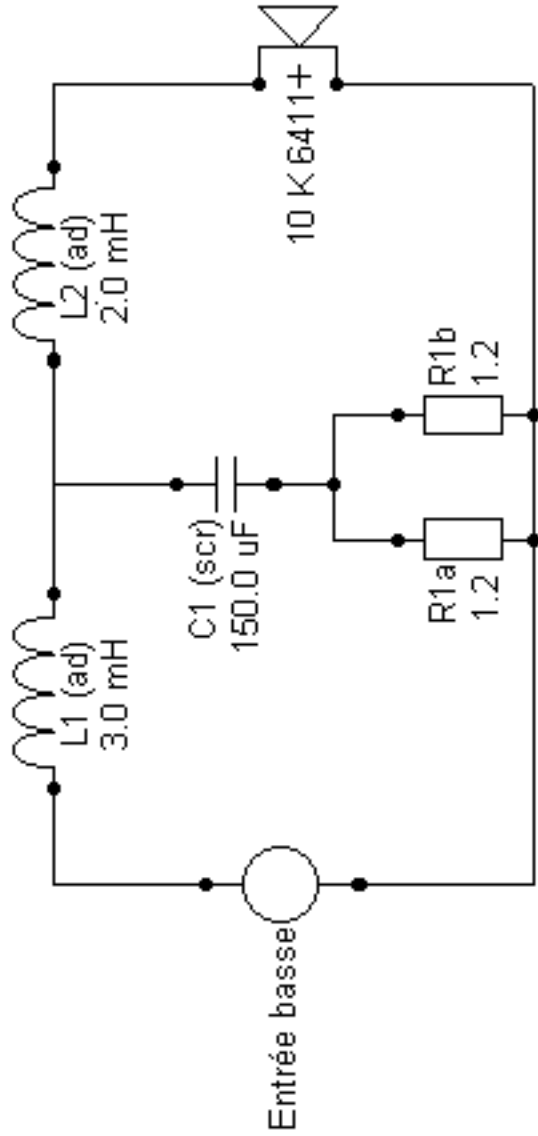
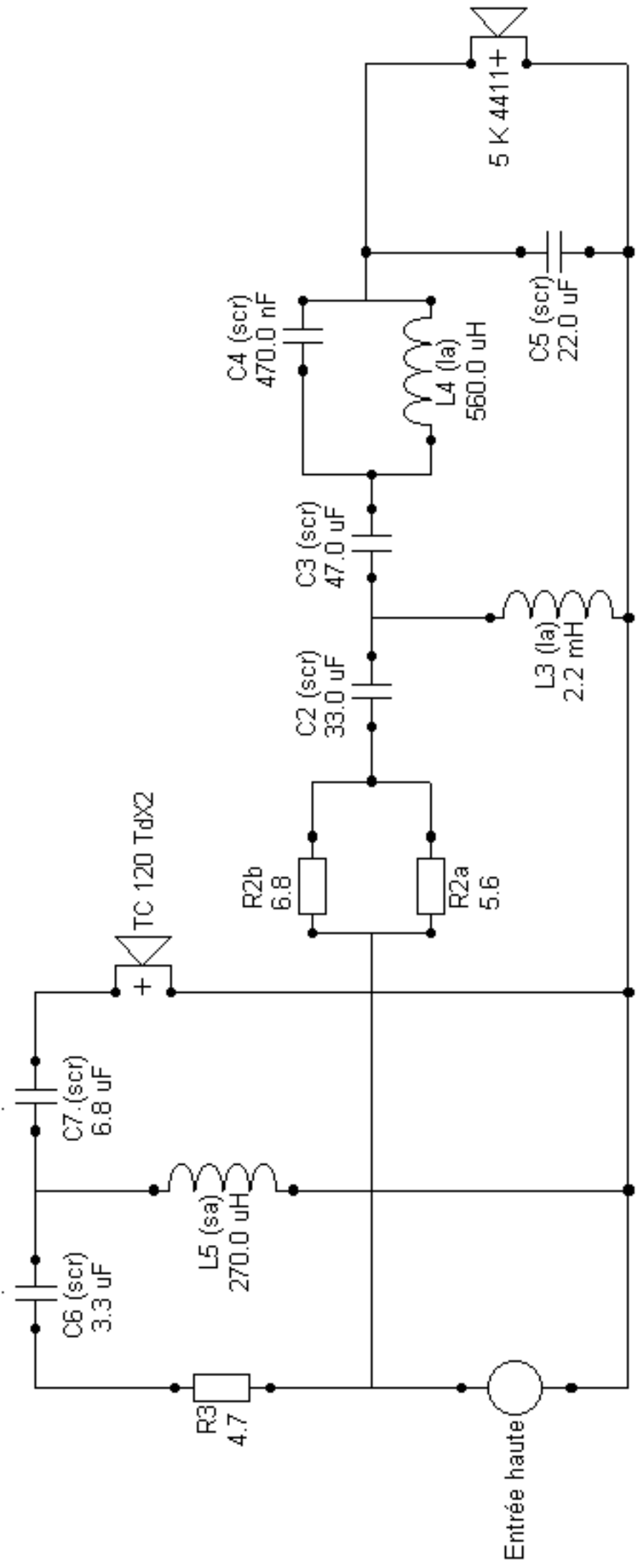
Fs	28.3	Hz
Vas	124.1	l
Qts	0.29	
Qes	0.30	
Qms	9.31	
Re	5.2	Ω
Sd	356.3	cm ²
Cas	883E-9	m ² /N
Mas	35.8	kg/m ⁴
Ras	683.8	Ω .ac
Cms	696E-6	m/N
Mms	45.5	g
Rms	868	g/s
Ces	327.0	μ F
Les	96.7	mH
Res	160.1	Ω
Bl	11.8	N/A
SPL	91.6	dB/W/m

SIMULATION

Ql:	7	Ω
Rg:	0.8	
Qts (+Rg):	0.33	



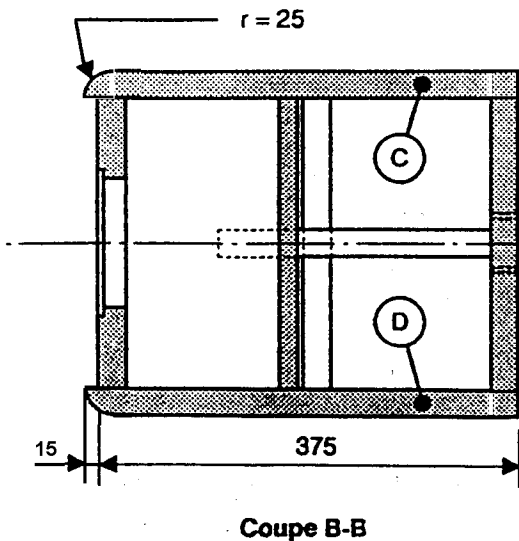
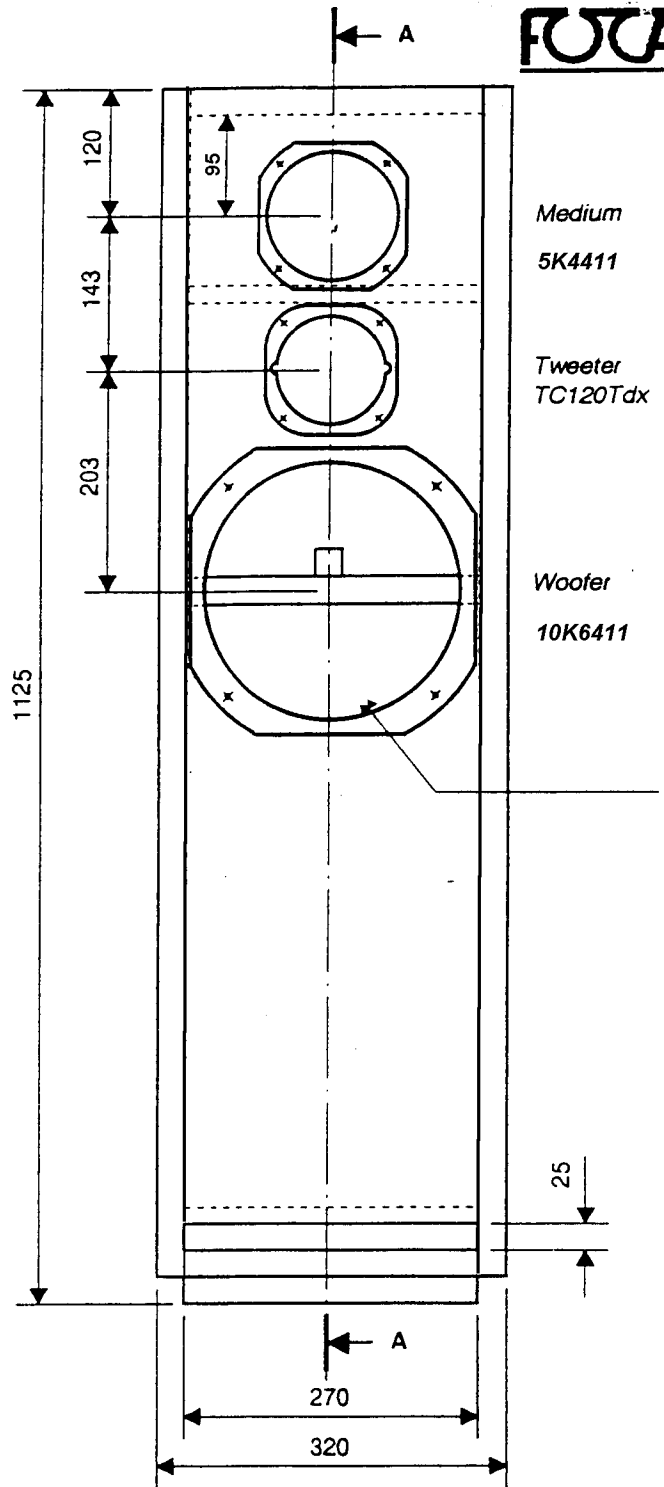
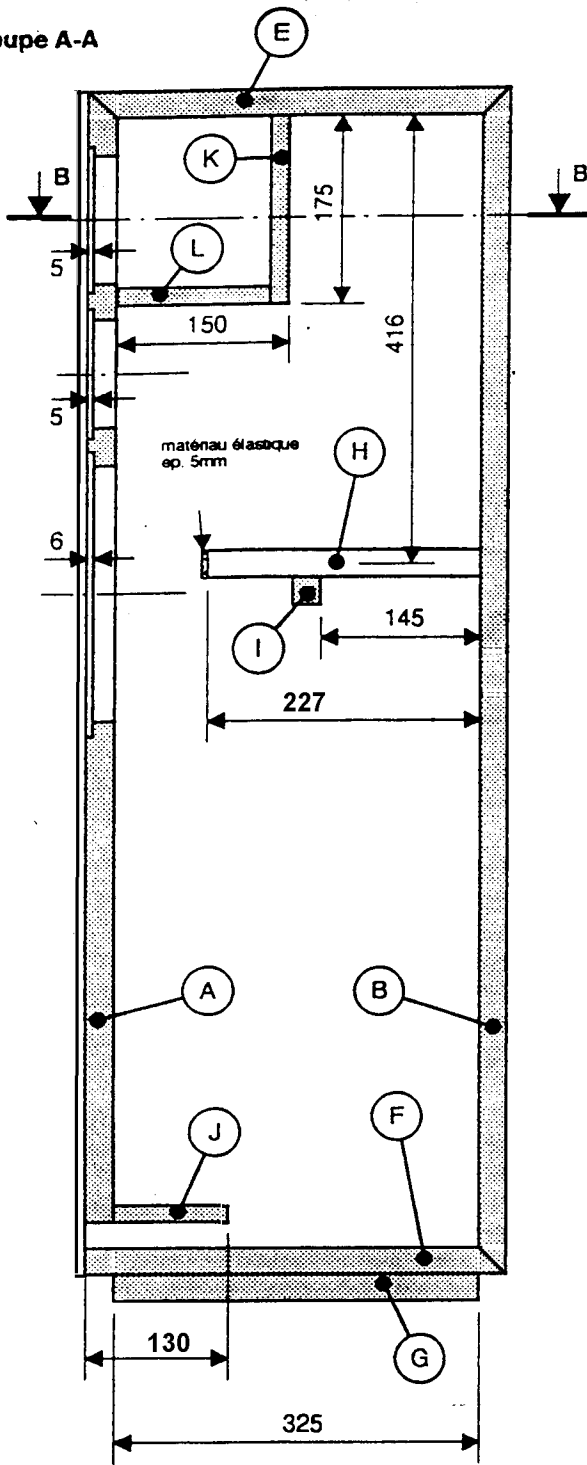
Vb:	60	l
Fb:	35.5	Hz
F-3:	37.9	Hz



Kit FOCALC800
Filtre C800 mk2

(les résistances sont en ohmes)

Coupe A-A



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.