$f_d := 26 \cdot Hz$

$R_e := 6.1 \cdot \Omega$

$L_{vc} := 1.45 \cdot mH$

$Bl := 15.6 \cdot \frac{newton}{amp}$

$S_d := 515 \cdot cm^2$

$V_{ad} := 150 \cdot liter$

$Q_{ed} := 0.38$

$Q_{md} := 3.52$

$Q_{td} := \left(\frac{1}{Q_{ed}} + \frac{1}{Q_{md}} \right)^{-1}$

$Q_{td} = 0.343$

Closed End of Transmission Line (Driver ---> Closed End)

Section Length	Initial Area	Final Area	Stuffing Density
$L_{c_0} := 30 \cdot in$	$S_{c_{0,0}} := 3 \cdot S_d$	$S_{c_{0,1}} := 3 \cdot S_d$	$D_{c_0} := 0.9 \cdot lb \cdot ft^{-3}$

Open End of Transmission Line (Driver ---> Open End)

Section Length	Initial Area	Final Area	Stuffing Density
$L_{o_0} := 30 \cdot in$	$S_{o_{0,0}} := 3 \cdot S_d$	$S_{o_{0,1}} := 3 \cdot S_d$	$D_{o_0} := 0.9 \cdot lb \cdot ft^{-3}$
$L_{o_1} := 30 \cdot in$	$S_{o_{1,0}} := 3.0 \cdot S_d$	$S_{o_{1,1}} := 3.0 \cdot S_d$	$D_{o_1} := 0.0 \cdot lb \cdot ft^{-3}$
$L_{o_2} := 10 \cdot in$	$S_{o_{2,0}} := 0.5 \cdot S_d$	$S_{o_{2,1}} := 0.5 \cdot S_d$	$D_{o_2} := 0.0 \cdot lb \cdot ft^{-3}$

Total Length of the Transmission Line

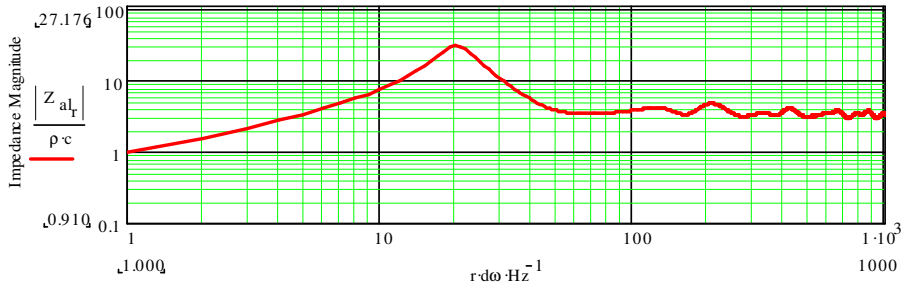
$$\sum_{i=0}^{n\_closed} L_{c_i} + \sum_{i=0}^{n\_open} L_{o_i} = 100.000 \cdot in$$

Total Amount of Stuffing

$$\left[\sum_{r=0}^{n\_closed} \left(\frac{S_{c_{r,0}} + S_{c_{r,1}}}{2} \cdot L_{c_r} \cdot D_{c_r} \right) \right] + \left[\sum_{r=0}^{n\_open} \left(\frac{S_{o_{r,0}} + S_{o_{r,1}}}{2} \cdot L_{o_r} \cdot D_{o_r} \right) \right] = 7.484 \cdot lb$$

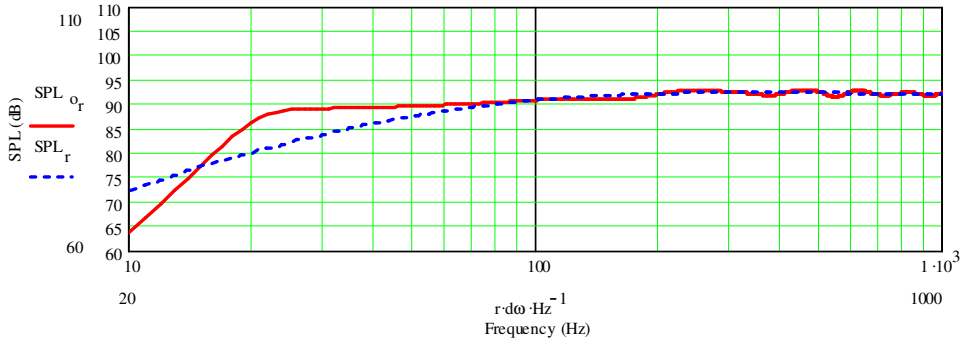
Enheden er monteret en tredjedel ned i linjen. Den sidste del er ikke dæmpet. Porten er i forlængelse af linjen, og kan laves som ved TABAQ. Linjen, som er på i alt 90 tommer kan foldes. Længden beregnes som en linje, der ligger midt i linjen hele vejen rundt. Kabinettet er ca. 125 liter. Dæmpning i alt: 7.484 lb = 3,4 KG

Kabinettet er tunet til ca. 20 Hz

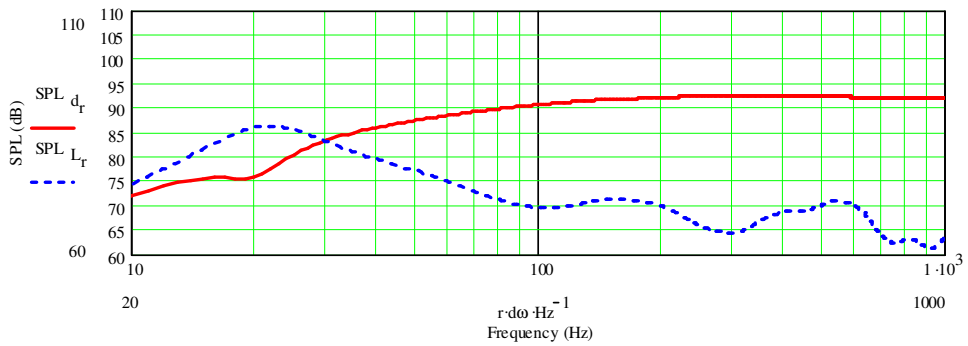


Samlet output. Den blå linje er enheden i uendelig baffel (fabrikkens opgivelse af frekevnsen)

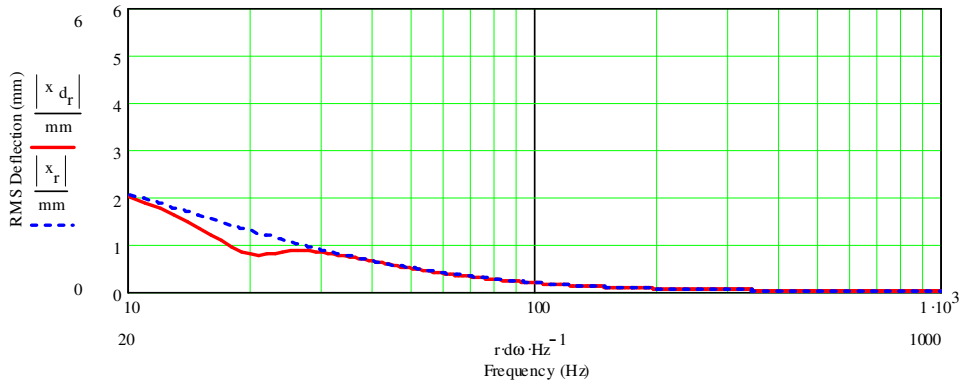
Delefrekvensen kan sættes så højt som enheden tillader. Der er ingen uønskede resonanser eller pukler forårsaget af kabinetdesignet.



Blå: Output fra åbningen. Rød: Direkte lyd fra enheden:



Mebranens bevægelse er under kontrol:



Bjørn Johannesen
bjohannesen@post.cybercity.dk

12-680/62 HEX
12" HEXACONE woofer for the outstanding combination of perfect sound and excellent pulse response.

Specifications:					
Overall Diam:	331	mm	Voice coil Ø:	62	mm
Baffle cutout:	291	mm	Voice coil height:	0	mm
Depth:	143	mm	Voice coil material:	Aluminium	
Front. Material:	-		Air gap height:	10	mm
Frame Material:	Pressure Diecasting		Air gap filling:	-	
Membrane Typ:	Cone		Magnet Ø:	173	mm
Membrane Surr:	Rubber		Magnet-height:	0	mm
Membrane Mat.:	HEXACONE		Magnet-weight:	0	g
Dustcap Mat.:	-		Magnet-inductance.	0	T

Thiele-Small-Parameters:							
Resonance frq.	fms:	26	Hz	Mech. Compliance	Cms	0	mm/N
Mechanical Q	Qms:	3.52		Moving Mass	Mms:	92	g
Electrical Q	Qes:	0.38		mech. Resistance	Rms:	0	kg/s-¹
Total Q	Qts:	0.34		Max. Displacement	Xmax:	14	mm
Equivalent Air-Vol.	Vas:	150	Liter	BL Product	Bl:	15.6	N/A
DC-Resistance	Re:	6.1	Ohm	Membrane- Ø	Md:	0	
Coil Inductance	Le:	1.45	mH	Membrane-Area	Sd:	515	cm²
Electr. Damping	Res:	0	Ohm	Max.cutoff frequency	fmax:	1.5	kHz
Efficiency	Nref:	0	%	Sound pressure	SPL:	91	dB