TABAQ with Tang Band 4” W4-1320SA

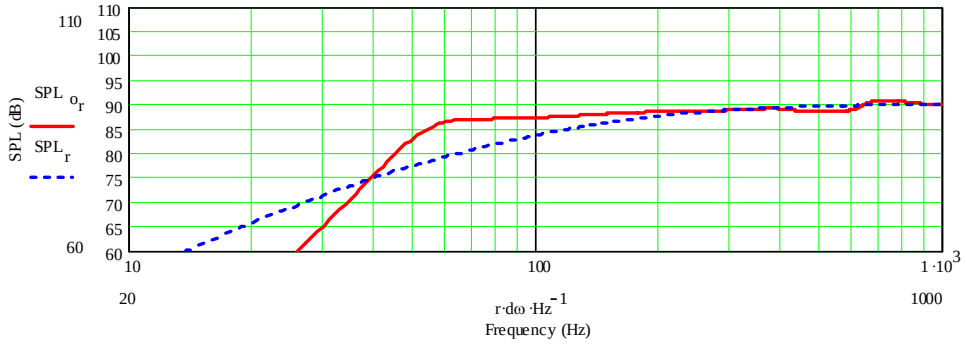
By Bjørn Johannesen, Copenhagen

Designed with MathCad models property of Martin J. King

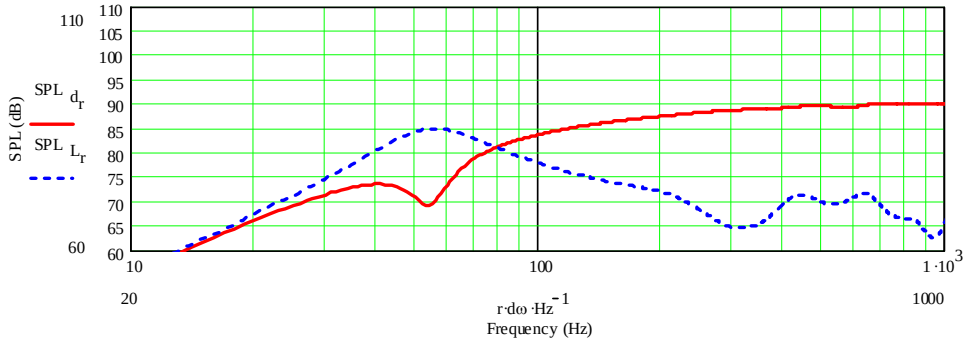
TABAQ designed for the Tang Band 3” Drivers can be used with Tang Band W4-1320SA without any changes of the cabinet.

The Physical layout of the driver can just fit into the front baffle.

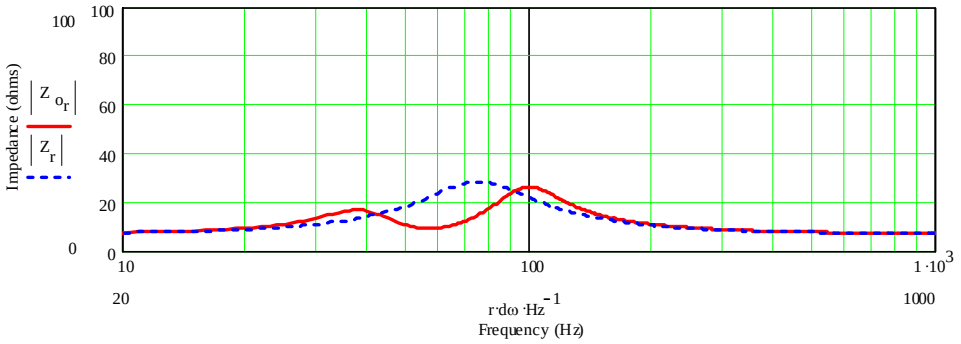
Summed SPL:



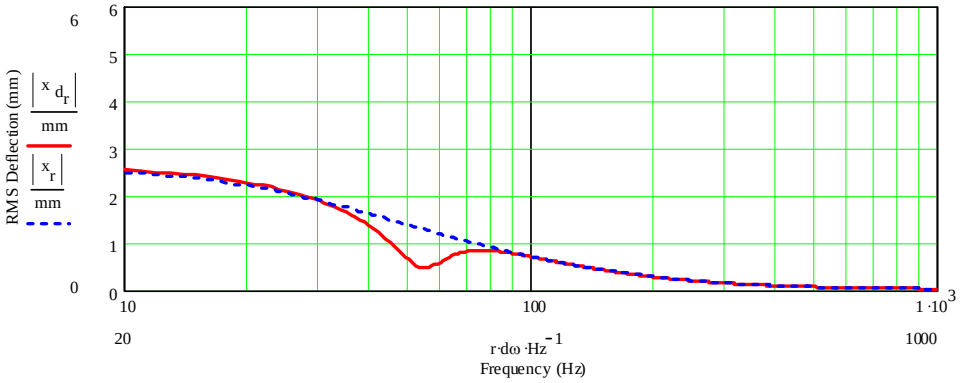
Driver and opening:

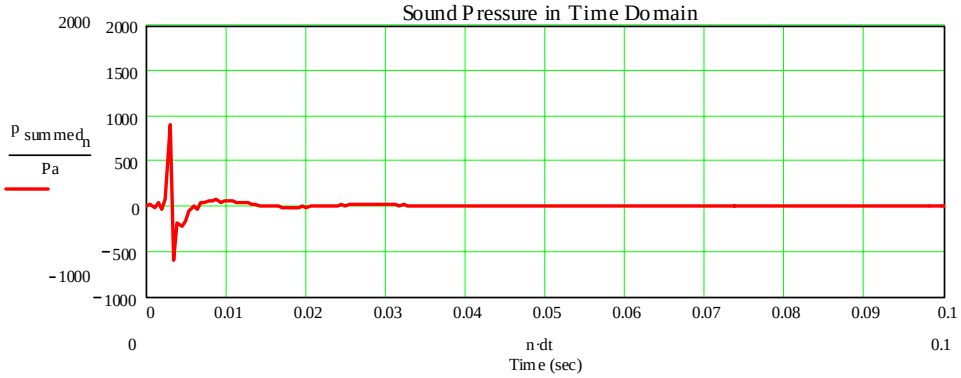


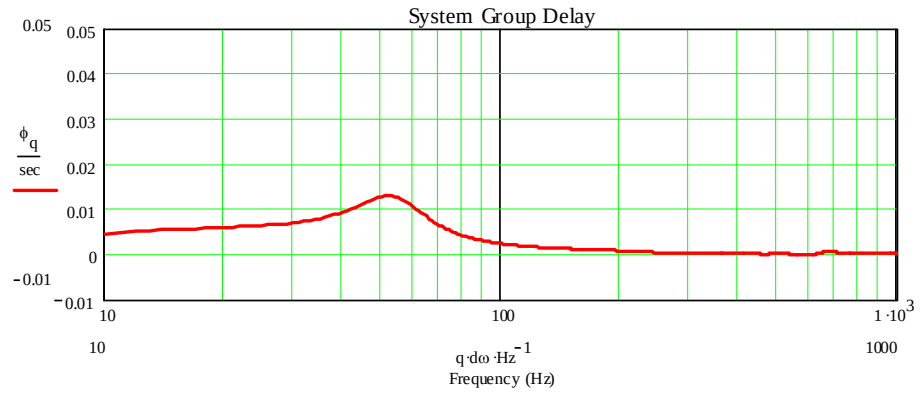
Impedance:



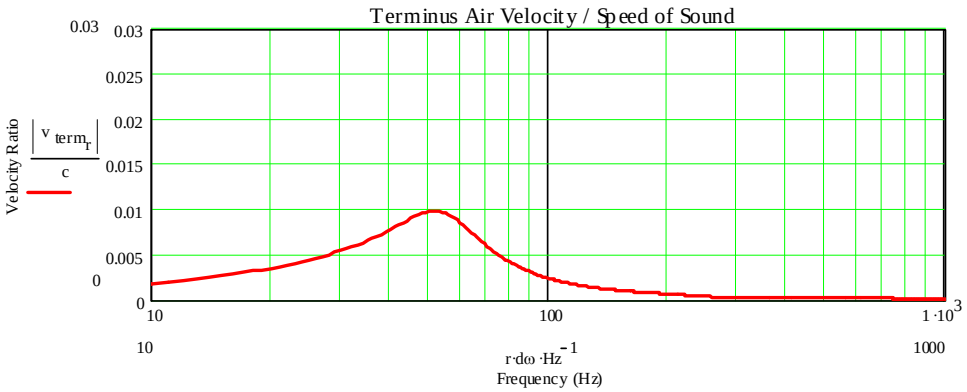
Displacement:







Terminus Ait Velocity is higher with the 4” driver compared to the 3” drivers:



$f_d := 75 \cdot Hz$

$R_e := 6.8 \cdot \Omega$

$L_{vc} := 0.01 \cdot mH$

$Bl := 4.8 \cdot \frac{newton}{amp}$

$S_d := 57 \cdot cm^2$

$V_{ad} := 5.99 \cdot liter$

$Q_{ed} := 0.48$

$Q_{md} := 1.50$

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

$Q_{td} = 0.364$

Section Length	Initial Area	Final Area	Stuffing Density
$L_{c_0} := 10 \cdot in$	$S_{c_{0,0}} := 2.246 \cdot S_d$	$S_{c_{0,1}} := 2.246 \cdot S_d$	$D_{c_0} := 0.99 \cdot lb \cdot ft^{-3}$

$L_{o_0} := 10 \cdot in$ $S_{o_{0,0}} := 2.246 \cdot S_d$ $S_{o_{0,1}} := 2.246 \cdot S_d$ $D_{o_0} := 0.99 \cdot lb \cdot ft^{-3}$

$L_{o_1} := 10 \cdot in$ $S_{o_{1,0}} := 2.246 \cdot S_d$ $S_{o_{1,1}} := 2.246 \cdot S_d$ $D_{o_1} := 0 \cdot lb \cdot ft^{-3}$

$L_{o_2} := 3.8 \cdot in$ $S_{o_{2,0}} := 0.281 \cdot S_d$ $S_{o_{2,1}} := 0.281 \cdot S_d$ $D_{o_2} := 0 \cdot lb \cdot ft^{-3}$