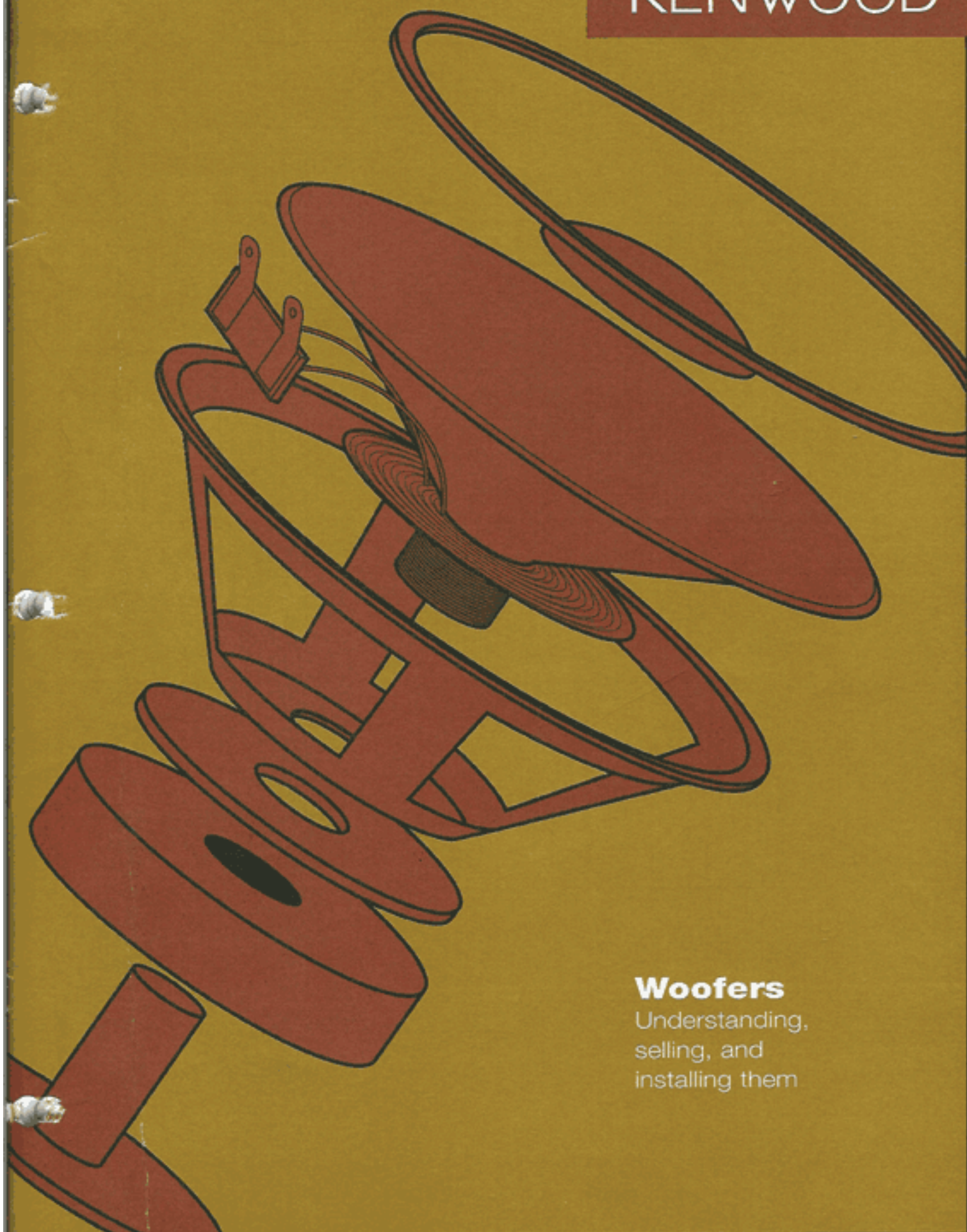


KENWOOD



Woofers

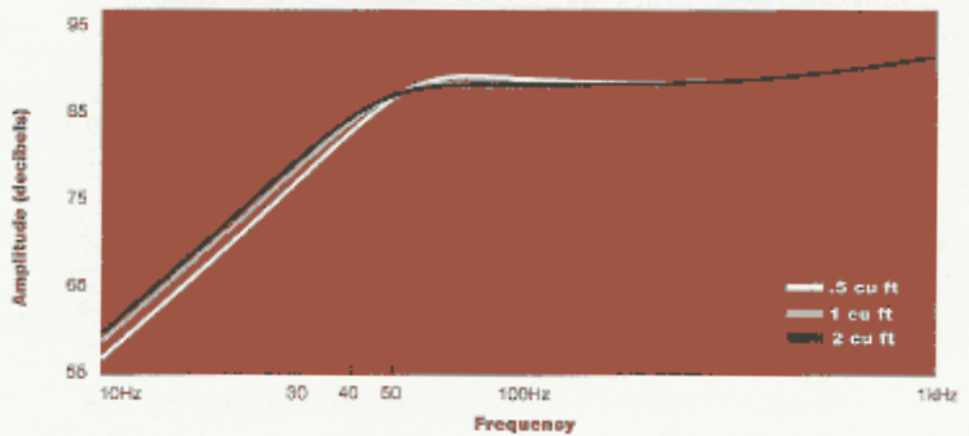
Understanding,
selling, and
installing them

KFC-W2000 woofer enclosure

Acoustic suspension enclosure



	Displacement (cubic feet)	Volume (cubic feet)	F3 (Hertz)	Qtc
Type 1	0.029	0.5	48	1.5
Type 2	0.029	1	45	1.2
Type 3	0.029	2	41	1.1



Vented enclosure

We do not recommend using a vented enclosure with the KFC-W2000.

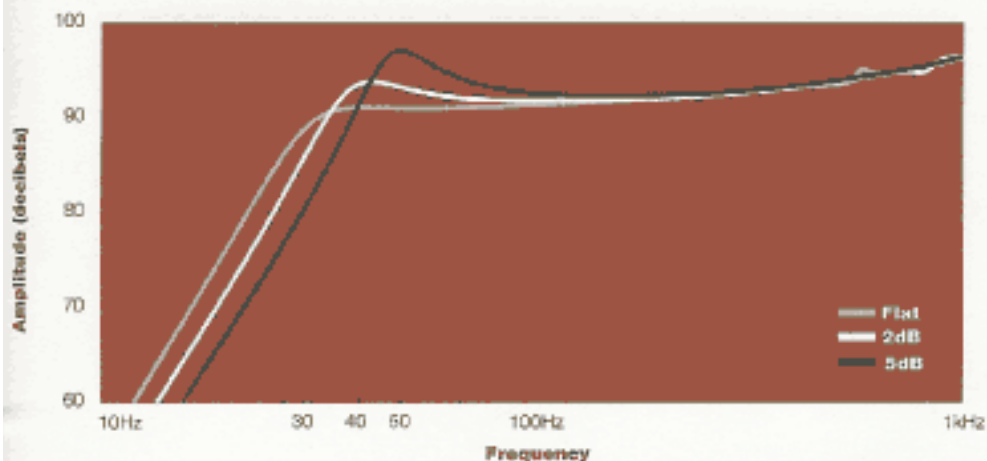
Iso-vent enclosure

We do not recommend using an iso-vent enclosure with the KFC-W2000.

KFC-W2500 woofer enclosure

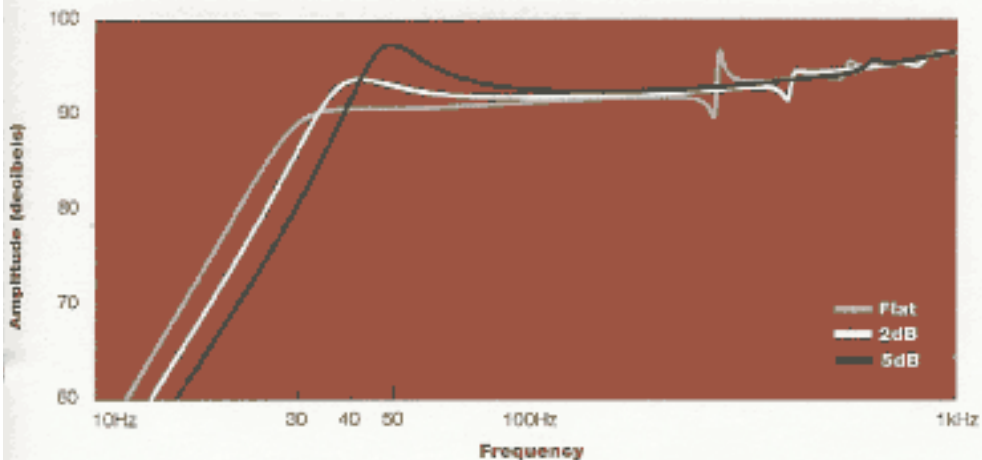
Vented enclosure

	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.078	1.5	5	10.02	29	28
Type 2	2	0.064	1.5	5	6.6	34	32
Type 3	5	1.5	5	7.44	42	37	



Iso-vent enclosure

	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.129	0.75	5	22.5	29	27
Type 2	2	0.097	0.75	5	14.7	35	31
Type 3	5	0.0755	0.75	5	8.885	45	37

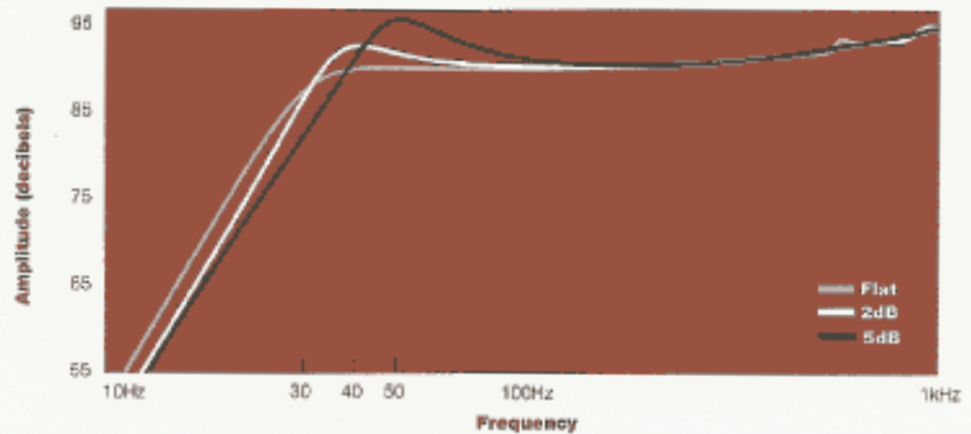


KFC-W2580 woofer enclosure

Vented enclosure



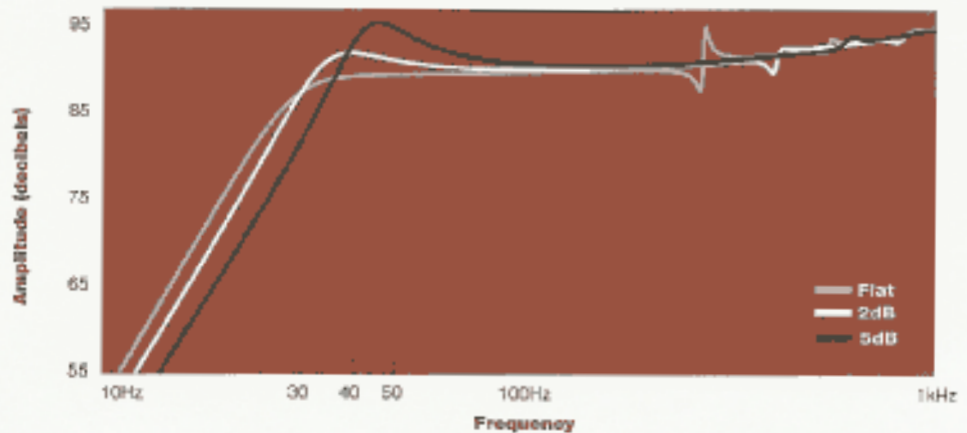
	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.454	1.5	5	10	29	29
Type 2	2	0.060	1.75	5	5.775	35	30
Type 3	5	0.052	1.75	5	5.729	38	35



Iso-vent enclosure



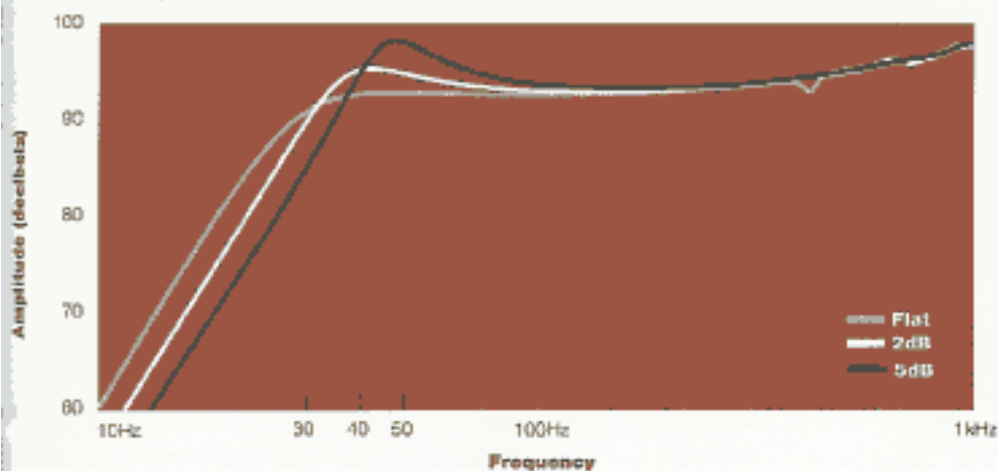
	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.129	0.75	5	22.5	29	28.6
Type 2	2	0.096	0.85	5	14.5	35	29.5
Type 3	5	0.074	0.85	5	9.11	40	34.6



KFC-W3000 woofer enclosure

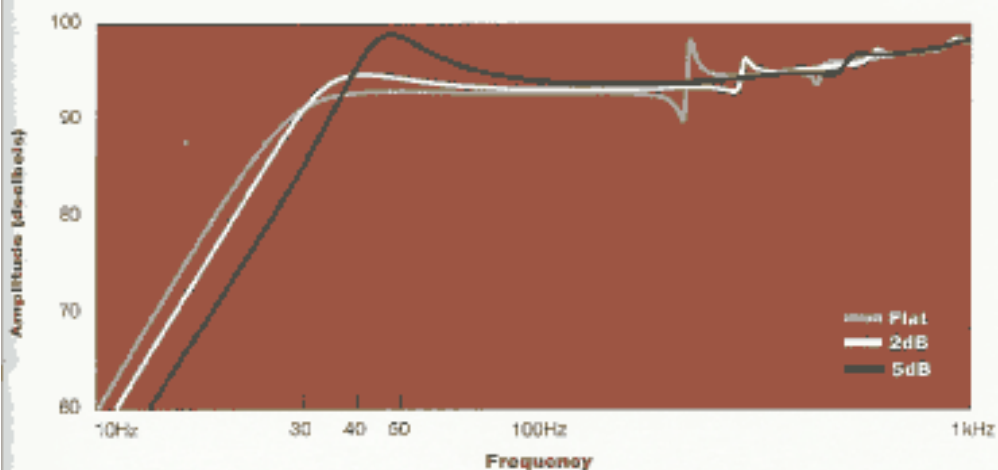
Vented enclosure

	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.184	2.5	4	15.288	26	27.6
Type 2	2	0.148	2.5	4	8.54	51	51
Type 3	5	0.116	2.5	4	4	59	55



Iso-vent enclosure

	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.148	1.25	5	14.85	27	27
Type 2	2	0.127	1.25	5	9.858	51	29
Type 3	5	0.160	1.25	4	10.017	59	54.6

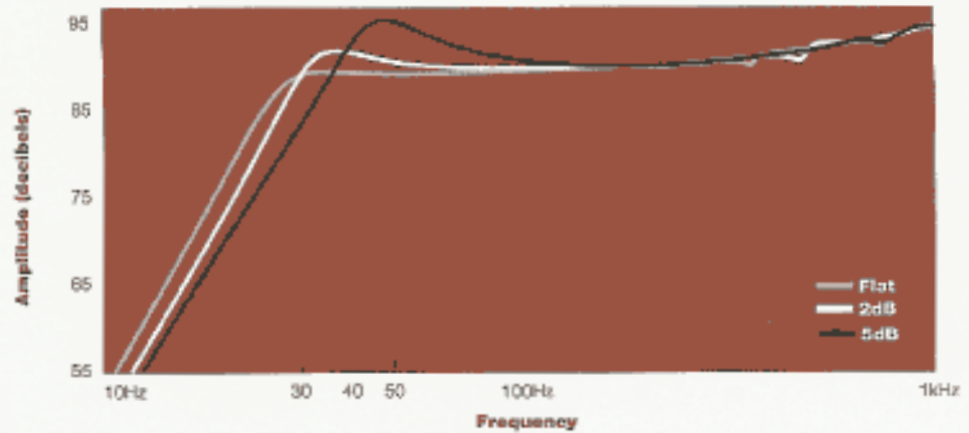


KFC-W3080 woofer enclosure

Vented enclosure



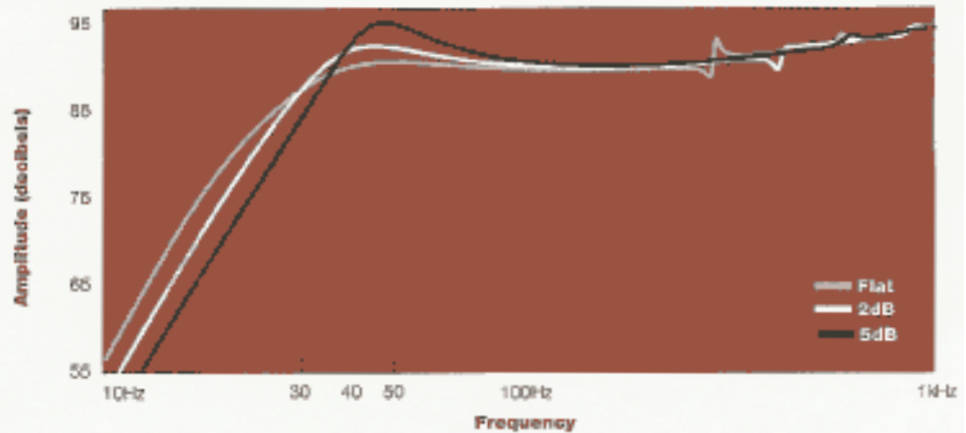
	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.203	2	4	16	27	25
Type 2	2	0.169	2	4	11.274	51	28
Type 3	5	0.534	2	4	6.897	57	33



Iso-vent enclosure



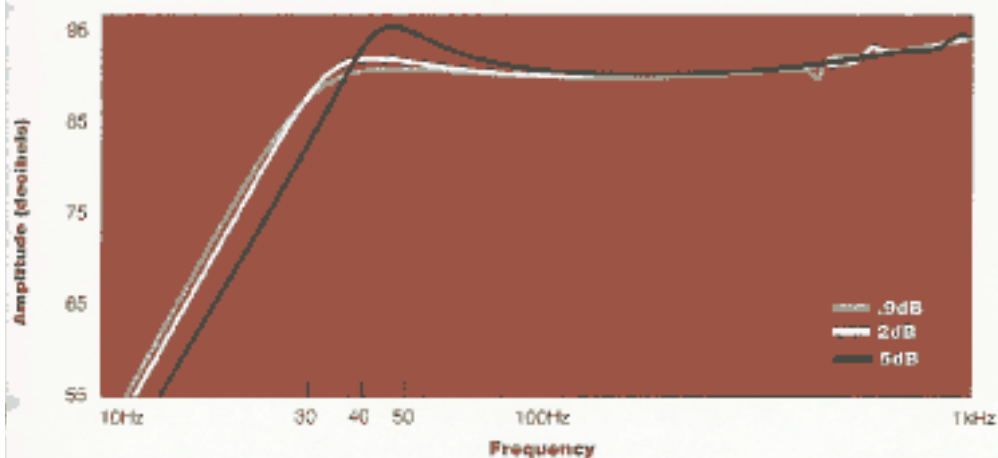
	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.477	1	2.5	14.165	26	28.6
Type 2	2	0.143	1	5	13.95	51	29.5
Type 3	5	0.124	1	5	9	37	33



KFC-HQW250 woofer enclosure

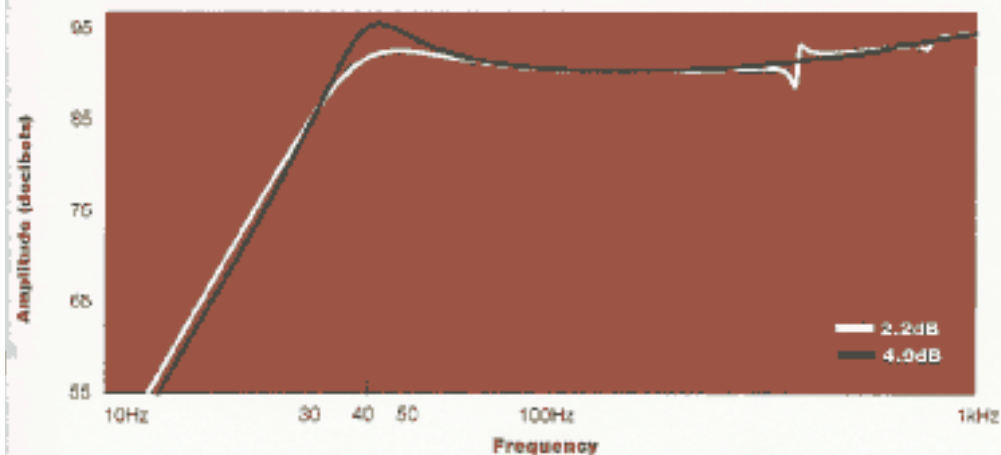
Vented enclosure

	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	0.9	0.136	1.125	5	13	50	29
Type 2	2	0.125	1.25	5	9.858	52	29
Type 3	5	0.107	1.25	5	5.79	39	34



Iso-vent enclosure

	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	not recommended						
Type 2	2.2	0.128	0.5	2.5	15.85	55	52
Type 3	4.9	0.107	0.75	2.5	8.6	57	51.5

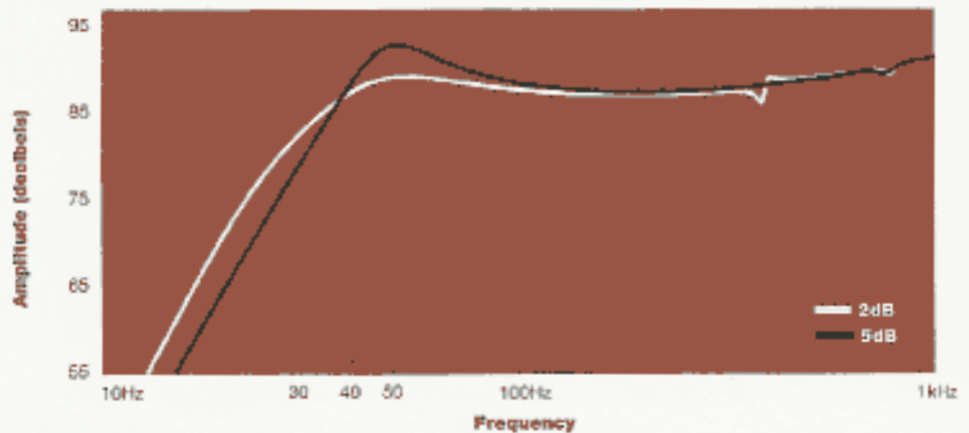


KFC-HQW258 woofer enclosure

Vented enclosure



	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	<i>not recommended</i>						
Type 2	2	0.147	0.85	5	15.667	52	51.8
Type 3	5	0.115	1	5	7.561	40	54



Iso-vent enclosure

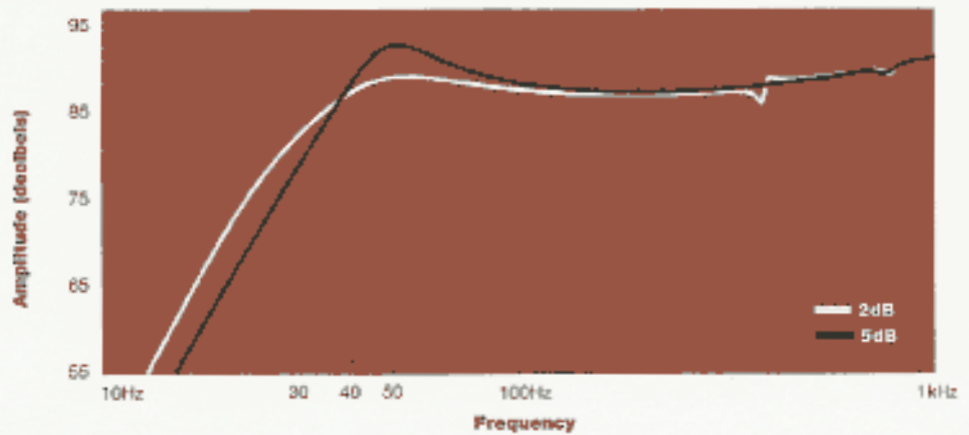
We can't recommend any iso-vent enclosures for the KFC-HQW258, since none of the configurations produced acceptable results.

KFC-HQW258 woofer enclosure

Vented enclosure



	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	<i>not recommended</i>						
Type 2	2	0.147	0.85	5	15.667	52	51.8
Type 3	5	0.115	1	5	7.561	40	54



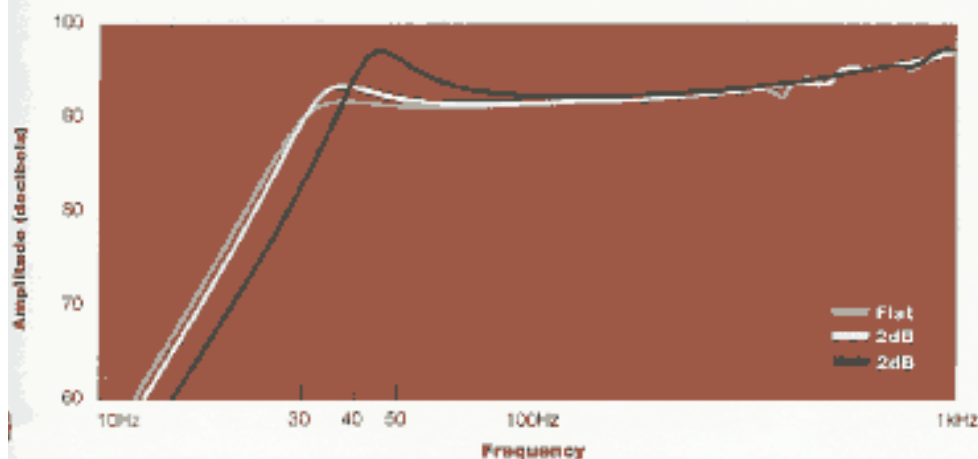
Iso-vent enclosure

We can't recommend any iso-vent enclosures for the KFC-HQW258, since none of the configurations produced acceptable results.

KFC-HQW300 woofer enclosure

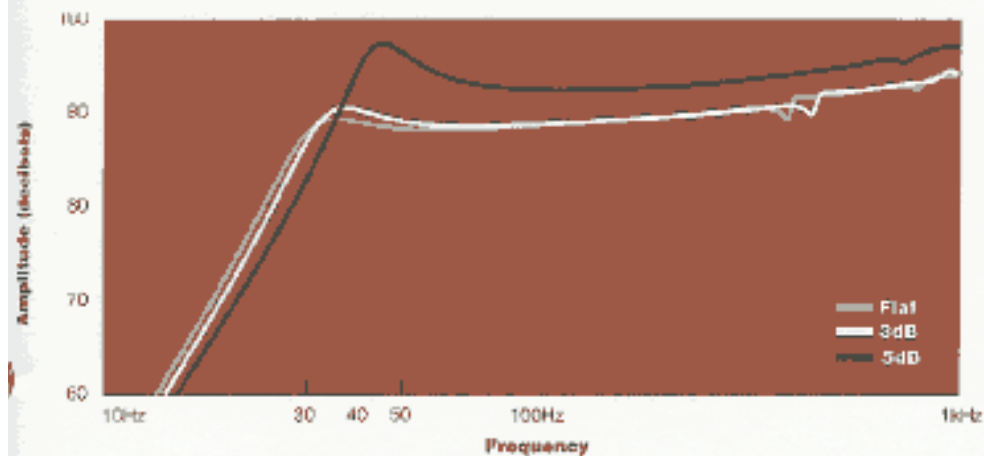
Vented enclosure

	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.255	1.75	4	14.5	30	28
Type 2	2	0.205	2	4	10.565	52	29
Type 3	2	0.17	2	4	9.4	40	35



Iso-vent enclosure

	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.192	1	5	15.068	30	27
Type 2	3	0.181	1	5	12.955	52	28.6
Type 3	5	1.58	1	5	7.561	40	34.6

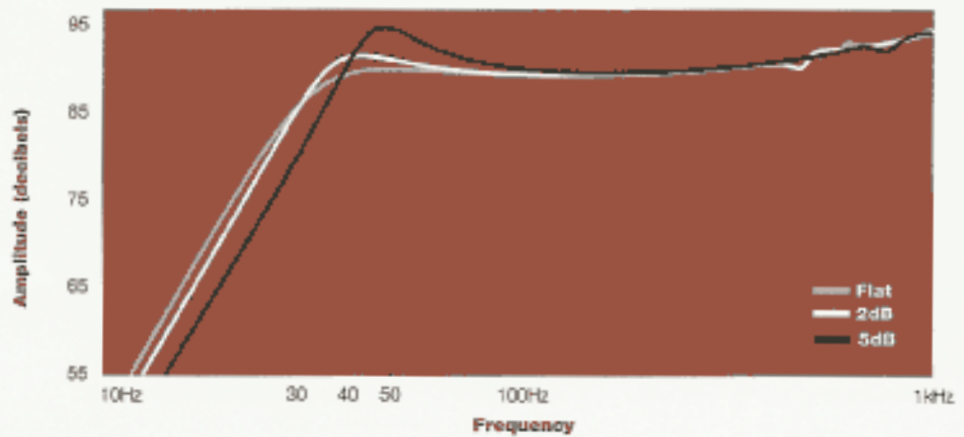


KFC-HQW308 woofer enclosure

Vented enclosure



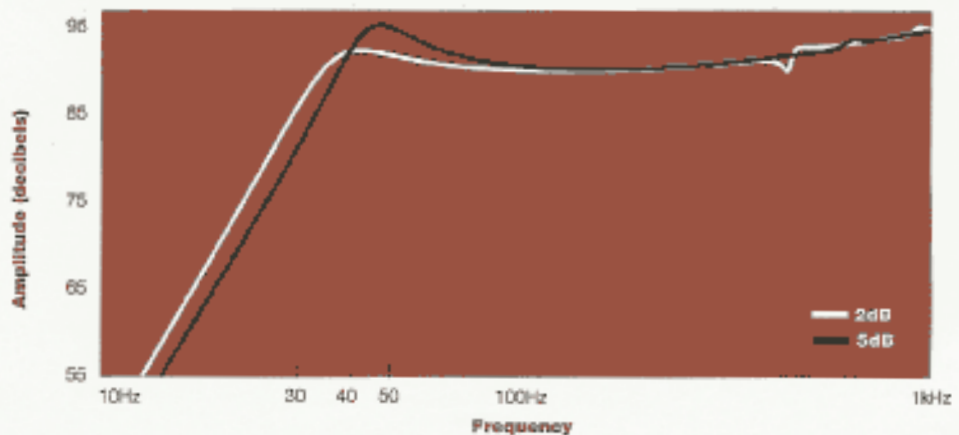
	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	Flat	0.166	1.5	5	9.196	50	50
Type 2	2	0.211	1.75	4	11.4	55	50
Type 3	5	0.177	1.75	4	6.7	40	54



Iso-vent enclosure



	Ripple (decibels)	Displacement (cubic feet)	Volume (cubic feet)	Port diameter (inches)	Port length (inches)	Fb (Hertz)	F3 (Hertz)
Type 1	not recommended						
Type 2	2	0.181	0.875	5	15	34	50
Type 3	5	0.163	0.875	5	8.77	40	54



Thiele-Small parameters

The Thiele-Small parameters are a way of looking at a speaker as an electrical circuit and predicting its performance using measurements of electrical and mechanical loss. The following table gives you all of the parameters you will ever need for Kenwood Subwoofers. Although you may not think you need this much detail, some of the parameters will come in handy if you use enclosure design software.

On page 44, we've included definitions of the parameters.

		KFC-W2000	KFC-W2500	KFC-W2580	KFC-W3000	KFC-W3080	KFC-HQW250	KFC-HQW258	KFC-HQW300	KFC-HQW308	Unit
Nominal impedance	Z	4	4	8	4	8	4	8	4	8	W
DC resistance	Re	3.16	3.51	6.44	3.15	6.82	3.80	6.54	3.25	6.49	W
Voice coil inductance	LBM	1.02	1.47	2.107	1.09	1.4	0.733	1.275	0.954	1.441	mH
Resonant frequency	Fs	40	28	29	25	26	31	32	29	30	Hz
Resonant frequency impedance	Zso	55.0	158.6	205.4	82.0	74.2	20.20	34.78	24.01	38.02	W
Mechanical Q factor	Qms	14.112	11.228	4.180	9.812	5.740	2.792	3.139	2.539	2.425	-
Electrical Q factor	Qes	0.739	0.537	0.418	0.592	0.506	0.545	0.629	0.597	0.516	-
Total Q factor	Qts	0.702	0.527	0.580	0.577	0.465	0.456	0.524	0.545	0.425	-
Volume acoustic compliance	Vas	0.52	2.62	2.41	4.85	3.65	1.48	1.50	2.61	2.50	cft
Mechanical resistance	Rms	1.679	2.517	1.024	3.879	0.810	5.113	5.702	4.761	7.846	lb/s
Moving mass	Mms	1.17	2.51	2.21	2.90	2.75	2.22	2.21	2.62	2.58	oz.
Suspension compliance	Cms	0.281/K	0.452/K	0.564/K	0.281/K	0.506/K	0.198/K	0.166/K	0.250/K	0.205/K	m/N
Emissive diameter of the diaphragm	D	0.154	0.210	0.215	0.256	0.256	0.215	0.215	0.247	0.247	m
Voice coil diameter	d	1.88	1.99	1.99	2.59	2.59	2.55	2.55	3.18	3.18	inch
Voice coil layers	n	2	4	4	2	2	2	2	2	2	-
Flux density	B	0.62	0.65	0.65	0.92	0.92	0.82	0.82	0.95	0.95	T
Force factor	BL	6.512	11.568	15.709	10.712	15.724	9.614	12.502	12.126	15.465	T,M
Diameter of magnet	A	4.35	4.72	4.72	5.71	5.71	5.12	5.12	6.14	6.14	inch
Weight of magnet		20.46	26.10	26.10	42.35	42.35	63.49	63.49	91.71	92.71	oz.
Total flux		0.86/K	0.86/K	0.86/K	1.52/K	1.73/K	1.52/K	1.52/K	2.19/K	2.19/K	Wb
Xmax		0.17	0.19	0.19	0.22	0.22	0.24	0.26	0.24	0.24	inch