



SERIE STUDIO

LOW FREQUENCY

12B100	57
12BR70	58
10BR60	59
8BR40	60
8WOOFERP	61



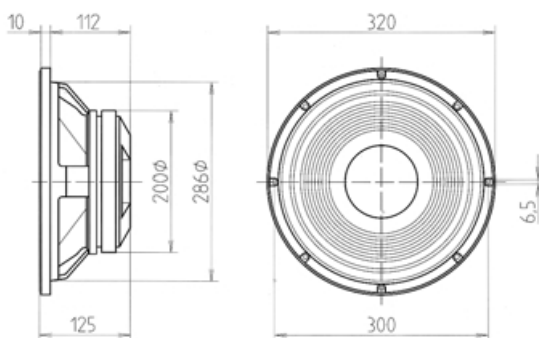
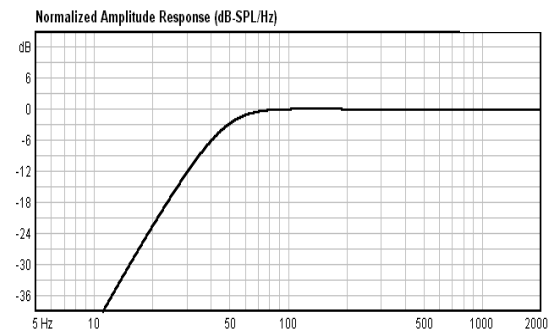
-Studio-

The 12 B100/R is a high compliance, bass loudspeaker, featuring wide, single polyurethane foam roll, a 4" voice coil diameter, and a massive, powerful magnet system. These ensure excellent efficiency and extended low frequency response. This model has been designed for use in bass-reflex or closed enclosures, in high quality multi-way systems.

Este altavoz de 12" de alta elasticidad, diseñado para aplicaciones de subwoofer o de graves, está dotado de una suspensión de espuma de media caña que le permite una elongación importante, y bobina de 4" de hilo plano movida por un circuito magnético de gran tamaño que le asegura una amplia respuesta en frecuencia con unos bajos profundos y contundentes. Diseñado para una utilización en recintos bass-reflex de sistemas de gran calidad.



PREDICTED LOW FREQUENCY RESPONSE • Bass-reflex cabinet, Vb=45.00 l, fb=38.0 Hz



SPECIFICATIONS

Nominal diameter	300 mm. 12 in.
Rated impedance	8 ohms.
Power capacity*	150 w RMS
Program Power	300 Watts.
Sensitivity	93.6 dB, 2.83v @ 1m @ 2π
Frequency range	25-4000 Hz
Recom. enclosure vol.	40/90 l 1.4/3.15 ft. ³
Voice coil diameter	100 mm. 4 in.
Magnetic assembly weight	6.4 kg. 14.08 lb.
BL factor	17.2 N/A
Moving mass	0.077 kg.
Voice coil length	12 mm.
Air gap height	7 mm.
X damage (peak to peak)	28 mm.

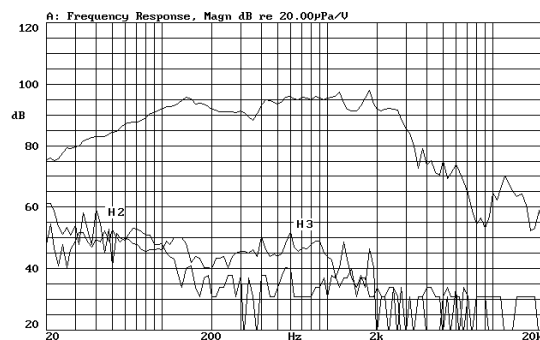
MOUNTING INFORMATION

Overall diameter	320 mm. 12.6 in.
Bolt circle diameter	300 mm. 11.8 in.
Baffle cutout diameter:	
-Front mount	286 mm. 11.26 in.
-Rear mount	280 mm. 11.02 in.
Depth	125 mm. 4.92 in.
Volume displaced by driver	5.5 l 0.19 ft. ³
Net weight	7.4 kg. 16.3 lb.
Shipping weight	8 kg. 17.6 lb.

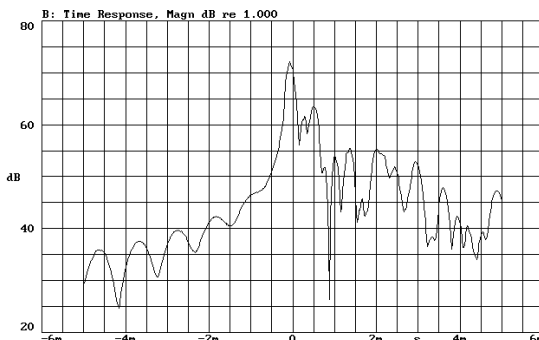
MATERIALS

Basket	Die Cast aluminium
Cone	Paper
Surround	Polyurethane foam
Voice coil	Edgewound copper ribbon
Magnet	Ferrite

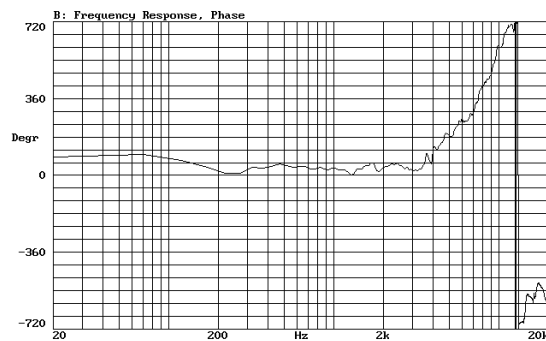
FREQUENCY RESPONSE & DISTORTION CURVES, MAGN. On axis, 1w @ 1m.



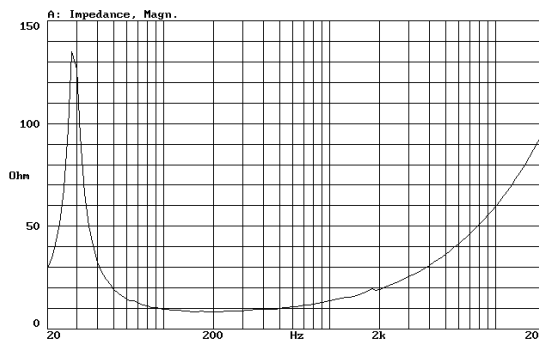
TIME RESPONSE, MAGN.



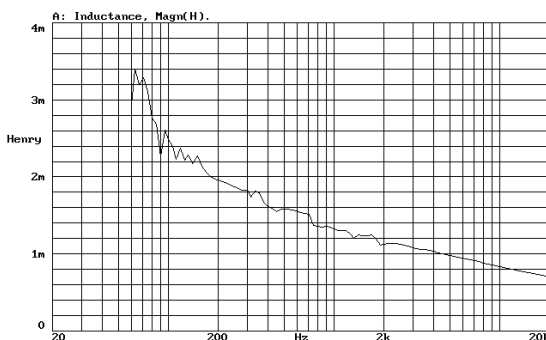
FREQUENCY RESPONSE, PHASE. On axis, 1w @ 1m.



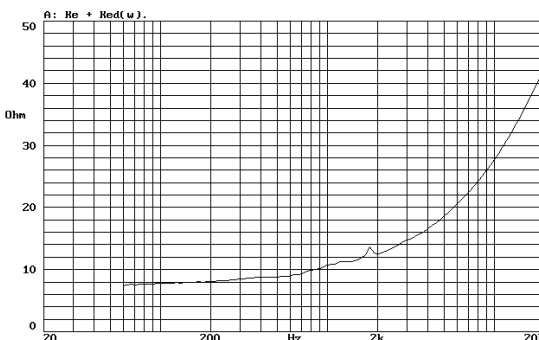
FREE AIR IMPEDANCE CURVE



VOICE COIL INDUCTANCE CURVE



Re + Red(w) CURVE



THIELE-SMALL PARAMETERS**

Resonant Frequency, fs	29 Hz
D.C. Voice Coil Resistance, Re	6.6 ohms.
Mechanical Quality Factor, Qms	6.49
Electrical Quality Factor, Qes	0.31
Total Quality Factor, Qts	0.30
Equivalent Air Volume to Cms, Vas	154 l
Mechanical Compliance, Cms	392 µm/N
Mechanical Resistance, Rms	2.16 kg/s
Efficiency, ηo (%)	1.2
Effective Surface Area, Sd(m ²)	0.053 m ²
Maximum Displacement, Xmax	3 mm.
Displacement Volume, Vd	160 cm. ³
Voice Coil Inductance, Le @ 1kHz	1.3 mH

NOTES

*The power capacity corresponds to the RMS maximum value that can dissipate the loudspeaker when a sinus signal is applied for a period of at least two hours.
Program power is defined as the transducer's ability to handle normal music program material.

** T-S parameters are measured after an exercise period using a preconditioning power test, using a velocity-current laser transducer, and will reflect the long term parameters, once the loudspeaker has been working for a short period of time.

NOTAS

*La potencia admisible corresponde a la máxima potencia RMS que puede disipar el altavoz durante al menos dos horas, cuando se le aplica una señal senoidal determinada.
Por potencia programa se entiende la capacidad del altavoz en el manejo de señales transitorias, como sería el proporcionado por el contenido de un pasaje musical normal.

* Los parámetros T-S han sido medidos después de un periodo de fatiga y estabilización de las suspensiones, mediante transductor laser de velocidad-corriente, y son el reflejo de los parámetros a largo plazo del altavoz, una vez éste haya sido instalado y haya trabajado en un corto espacio de tiempo.

12BR70

LOW FREQUENCY

-Studio-



SPECIFICATIONS

Nominal diameter	300 mm - 12 in.
Rated impedance	8 ohms
Power capacity	125 w RMS
Program Power	250 w
Sensitivity	94.5 dB 2.83 v @ 1 m @ 2π
Frequency range	25 - 4000 Hz
Recom. enclosure vol.	50 - 120 l 1.77 - 4.24 ft. ³
Voice coil diameter	52 mm. 2 in.
Magnetic assembly weight	2.75 kg. 6.1 lb.
BL Factor	13.3 N/A
Moving mass	0.065 kg.
Voice coil length	19 mm.
Air gap height	7 mm.
X damage (peak to peak)	25 mm.

MOUNTING INFORMATION

Overall diameter	320 mm. / 12.6 in.
Bolt circle diameter	299 mm. / 11.77 in.
Baffle cutout diameter	
Front mount	286 mm. / 11.26 in.
Rear mount	280 mm. / 11.02 in.
Depth	125 mm. / 4.92 in.
Volume displaced by driver	4 l / 0.14 ft. ³
Net weight	3.55 kg / 7.81 lb.
Shipping weight	4 kg / 8.81 lb.

MATERIALS

Basket	Die Cast aluminium
Cone	Paper
Surround	Rubber
Voice coil	Copper
Magnet	Ferrite

THIELE-SMALL PARAMETERS**

Resonant Frequency, fs	35 Hz
D.C. Voice Coil Resistance, Re	5.6 ohms.
Mechanical Quality Factor, Qms	1.85
Electrical Quality Factor, Qes	0.44
Total Quality Factor, Qts	0.36
Equivalent Air Volume to Cms, Vas	135 l
Mechanical Compliance, Cms	330 μm/N
Mechanical Resistance, Rms	7 kg/s
Efficiency, ηo (%)	1.2 %
Effective Surface Area, Sd(m ²)	0.054 m ²
Maximum Displacement, Xmax	6 mm
Displacement Volume, Vd	340 cm ³
Voice Coil Inductance, Le @ 1kHz	1 mH

NOTES

*The power capacity corresponds to the RMS maximum value that can dissipate the loudspeaker when a sinus signal is applied for a period of at least two hours.
Program power is defined as the transducer's ability to handle normal music program material.

** T-S parameters are measured after an exercise period using a preconditioning power test, using a velocity-current laser transducer, and will reflect the long term parameters, once the loudspeaker has been working for a short period of time.

NOTAS

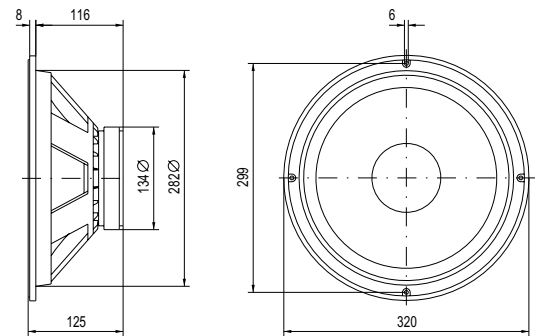
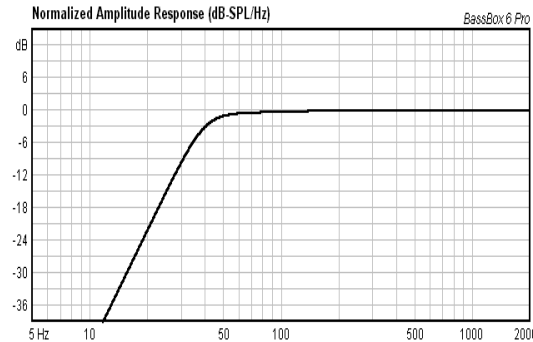
*La potencia admisible corresponde a la máxima potencia RMS que puede disipar el altavoz durante al menos dos horas, cuando se le aplica una señal senoidal determinada.
Por potencia programa se entiende la capacidad del altavoz en el manejo de señales transitorias, como sería el proporcionado por el contenido de un pasaje musical normal.

* Los parámetros T-S han sido medidos después de un periodo de fatiga y estabilización de las suspensiones, mediante transductor laser de velocidad-corriente, y son el reflejo de los parámetros a largo plazo del altavoz, una vez éste haya sido instalado y haya trabajado en un corto espacio de tiempo.

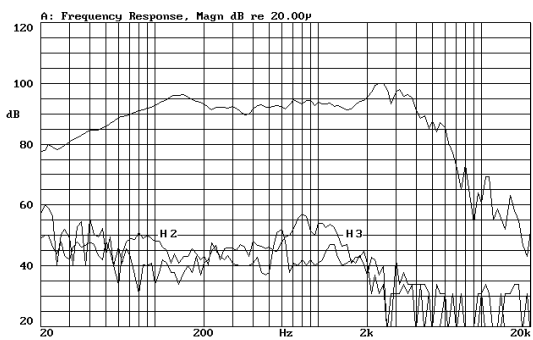
This 12" bass loudspeaker has been specifically designed to deliver exceptional low frequency reproduction, with high sensitivity and extremely low distortion. It incorporates a curvilinear cone attached to a rubber surround, in order to provide suspension stability and to allow maximum excursion linearity. By combining a powerful magnet construction with a cast aluminium basket, the 12 BR70 achieves high power capacity, and consequently, contributes to reduce the thermal power compression.

Modelo de 12" de bajas frecuencias. Utiliza un cono curvilíneo con el fin de obtener una respuesta lineal, unido a una suspensión de goma sintética para evitar los problemas inherentes a las tradicionales suspensiones de espuma de poliuretano, sujetas a un envejecimiento muy marcado y con unas características mecánicas inestables. Esto se traduce en una respuesta impulsional muy rápida y unas variaciones insignificantes de los parámetros del altavoz con el transcurso del tiempo, lo que redunda en unos graves nitidos y profundos, de gran impacto, así como un elevado rendimiento.

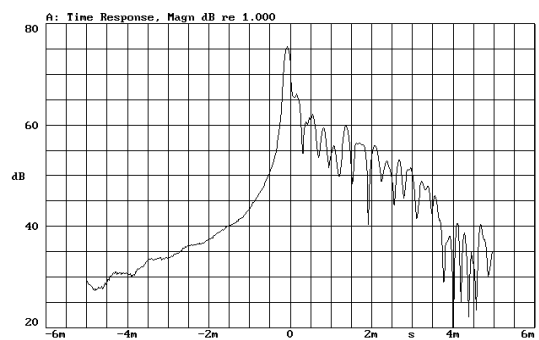
PREDICTED LOW FREQUENCY RESPONSE • Bass-reflex cabinet, Vb=90.00 l, fb=38.0 Hz



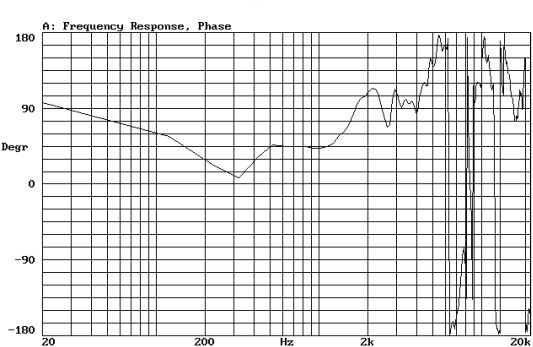
FREQUENCY RESPONSE & DISTORTION CURVES, MAGN. On axis, 1w @ 1m.



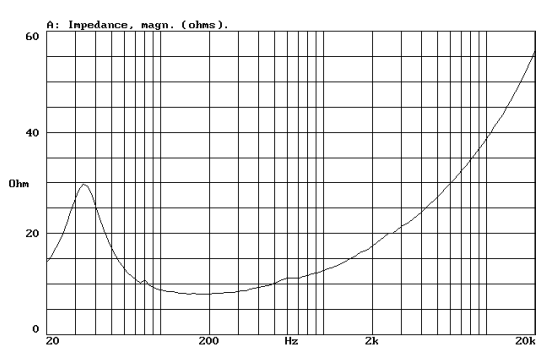
TIME RESPONSE, MAGN.



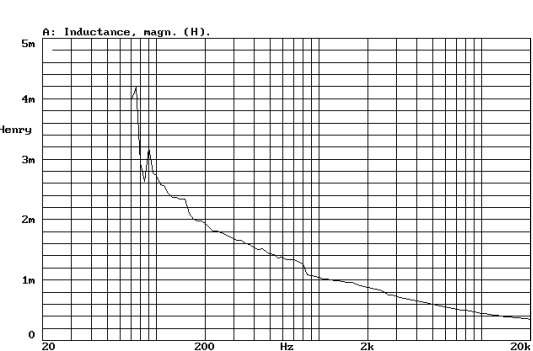
FREQUENCY RESPONSE, PHASE. On axis, 1w @ 1m.



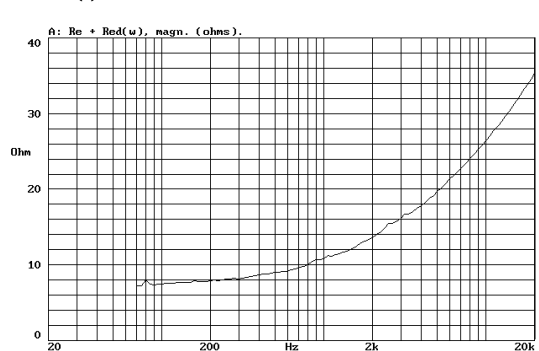
FREE AIR IMPEDANCE CURVE



VOICE COIL INDUCTANCE CURVE



Re + Red(w) CURVE

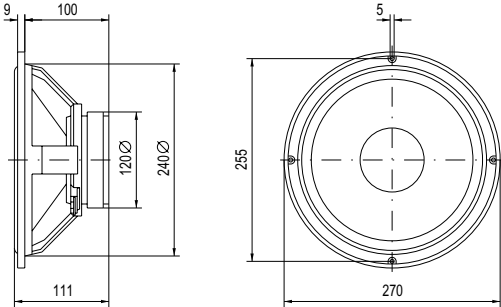
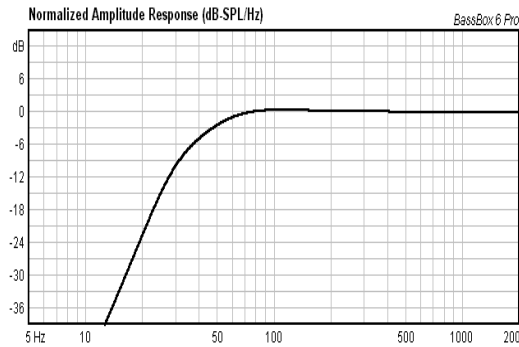


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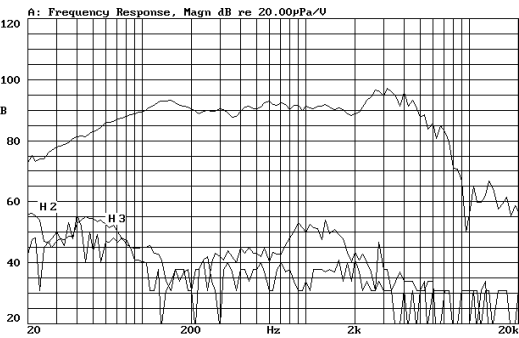
This 10" bass and mid bass loudspeaker has been specifically designed to deliver exceptional low and mid frequency reproduction, with high sensitivity and extremely low distortion. It incorporates a curvilinear cone attached to a rubber surround, in order to provide suspension stability and to allow maximum excursion linearity. By combining a powerful magnet construction with a cast aluminium basket, this model achieves high power capacity, and consequently, contributes to reduce the thermal power compression.

Modelo de 10" de bajas y medias frecuencias. Utiliza un cono curvilíneo con el fin de obtener una respuesta lineal, unido a una suspensión de goma sintética para evitar los problemas inherentes a las tradicionales suspensiones de espuma de poliuretano, sujetas a un envejecimiento muy marcado y con unas características mecánicas inestables. Esto se traduce en una respuesta impulsional muy rápida y unas variaciones insignificantes de los parámetros del altavoz con el transcurso del tiempo, lo que redunda en unos graves nítidos y profundos, de gran impacto, y unos medios naturales y de gran definición.

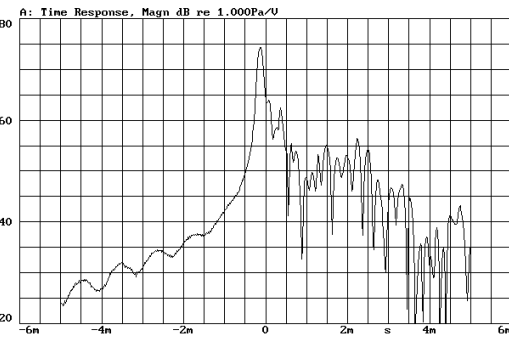
PREDICTED LOW FREQUENCY RESPONSE • Bass-reflex cabinet, Vb=40 l, fb=38 Hz



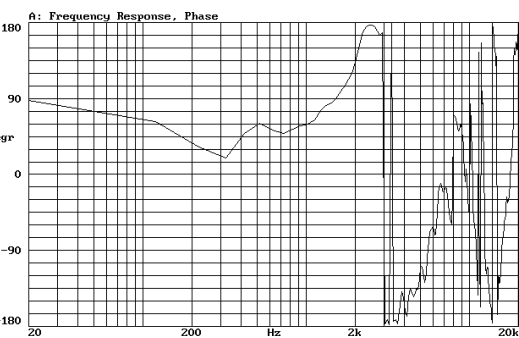
FREQUENCY RESPONSE & DISTORTION CURVES, MAGN. On axis, 1w @ 1m.



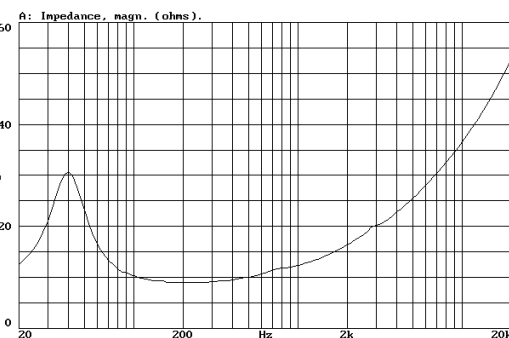
TIME RESPONSE, MAGN.



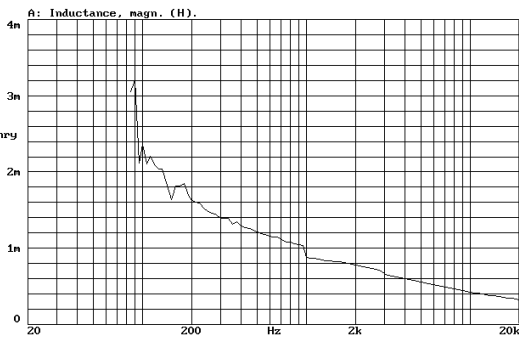
FREQUENCY RESPONSE, PHASE. On axis, 1w @ 1m.



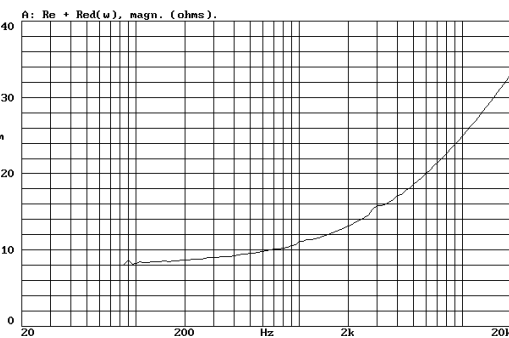
FREE AIR IMPEDANCE CURVE



VOICE COIL INDUCTANCE CURVE



Re + Red(w) CURVE



SPECIFICATIONS

Nominal diameter	250 mm. – 10 in.
Rated impedance	8 ohms
Power capacity*	100 w RMS
Program Power	200 w
Sensitivity	91.5 dB 2.83 v @ 1 m @ 2π
Frequency range	30 – 5000 Hz
Recom. enclosure vol.	30 – 100 l 1.06 / 3.53 ft. ³
Voice coil diameter	52 mm. – 2 in.
Magnetic assembly weight	2.75 kg 6.1 lb
BL Factor	12.4 N/A
Moving mass	0.050 kg
Voice coil length	16 mm.
Air gap height	7 mm.
X damage (peak to peak)	30 mm.

MOUNTING INFORMATION

Overall diameter	270 mm / 10.62 in
Bolt circle diameter	255 mm / 10.03 in
Baffle cutout diameter	
Front mount	240 mm / 9.44 in
Rear mount	230 mm / 9.05 in
Depth	111 mm / 4.37 in
Volume displaced by driver	2.5 l / 0.08 ft. ³
Net weight	2.9 kg / 6.38 lb
Shipping weight	3.4 kg / 7.48 lb

MATERIALS

Basket	Die Cast aluminium
Cone	Paper
Surround	Rubber
Voice coil	Copper
Magnet	Ferrite

THIELE-SMALL PARAMETERS**

Resonant Frequency, fs	45 Hz
D.C. Voice Coil Resistance, Re	6.5 ohms.
Mechanical Quality Factor, Qms	1.9
Electrical Quality Factor, Qes	0.62
Total Quality Factor, Qts	0.47
Equivalent Air Volume to Cms, Vas	47 l
Mechanical Compliance, Cms	230 μm/N
Mechanical Resistance, Rms	5.1 kg/s
Efficiency, ηo (%)	0.75 %
Effective Surface Area, Sd(m ²)	0.038 m ²
Maximum Displacement, Xmax	6 mm
Displacement Volume, Vd	240 cm. ³
Voice Coil Inductance, Le @ 1kHz	1.1 mH

NOTES

*The power capacity corresponds to the RMS maximum value that can dissipate the loudspeaker when a sinus signal is applied for a period of at least two hours.
Program power is defined as the transducer's ability to handle normal music program material.

** T-S parameters are measured after an exercise period using a preconditioning power test, using a velocity-current laser transducer, and will reflect the long term parameters, once the loudspeaker has been working for a short period of time.

NOTAS

*La potencia admisible corresponde a la máxima potencia RMS que puede disipar el altavoz durante al menos dos horas, cuando se le aplica una señal senoidal determinada.
Por potencia programa se entiende la capacidad del altavoz en el manejo de señales transitorias, como sería el proporcionado por el contenido de un pasaje musical normal.

* Los parámetros T-S han sido medidos después de un periodo de fatiga y estabilización de las suspensiones, mediante transductor laser de velocidad-corriente, y son el reflejo de los parámetros a largo plazo del altavoz, una vez este haya sido instalado y haya trabajado en un corto espacio de tiempo.

8BR40

LOW FREQUENCY



SPECIFICATIONS

Nominal diameter	200 mm - 8 in.
Rated impedance	8 ohms
Power capacity*	50 w RMS
Program Power	100 w
Sensitivity	90 dB 2.83 v @ 1m @ 2π
Frequency range	35 - 6000 Hz
Recom. enclosure vol.	20 - 60 l 0.7 - 2.12 ft. ³
Voice coil diameter	25.8 mm. 1 in.
Magnetic assembly weight	1 kg. 2.2 lb.
BL Factor	6.7 N/A
Moving mass	0.022 kg.
Voice coil length	16 mm.
Air gap height	6 mm.
X damage (peak to peak)	20 mm.

MOUNTING INFORMATION

Overall diameter	216 mm / 8.50 in.
Bolt circle diameter	200 mm / 7.87 in.
Baffle cutout diameter:	
-Front mount	182 mm / 7.16 in.
-Rear mount	185 mm / 7.28 in.
Depth	83 mm / 3.26 in.
Volume displaced by driver	1.5 l / 0.05 ft. ³
Net weight	1.34 kg / 2.93 lb.
Shipping weight	1.5 kg / 3.3 lb.

MATERIALS

Basket	Die Cast aluminium
Cone	Paper
Surround	Rubber
Voice coil	Copper
Magnet	Ferrite

THIELE-SMALL PARAMETERS**

Resonant Frequency, fs	31 Hz
D.C. Voice Coil Resistance, Re	6.3 ohms.
Mechanical Quality Factor, Qms	2.29
Electrical Quality Factor, Qes	0.6
Total Quality Factor, Qts	0.48
Equivalent Air Volume to Cms, Vas	82 l
Mechanical Compliance, Cms	1198 μm/N
Mechanical Resistance, Rms	1.9 kg/s
Efficiency, ηo (%)	0.4
Effective Surface Area, Sd(m ²)	0.022 m ²
Maximum Displacement, Xmax	6 mm
Displacement Volume, Vd	130 cm. ³
Voice Coil Inductance, Le @ 1kHz	0.7 mH

NOTES

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NOTAS

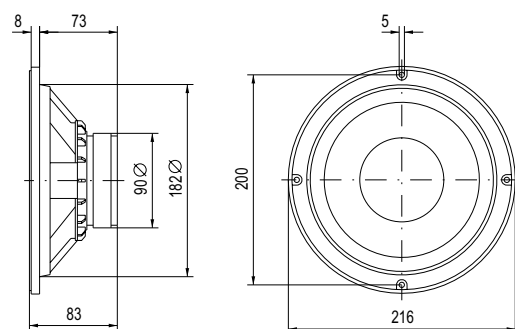
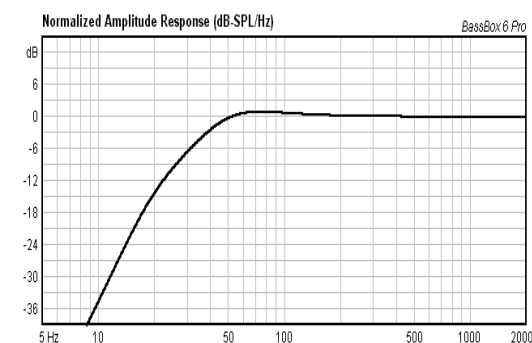
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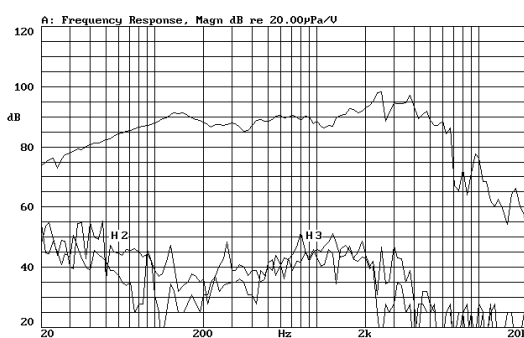
This 8" bass and mid bass loudspeaker has been specifically designed to deliver exceptional low and mid frequency reproduction, with high sensitivity and extremely low distortion. It incorporates a curvilinear cone attached to a rubber surround, in order to provide suspension stability and to allow maximum excursion linearity. By combining a powerful magnet construction with a cast aluminium basket, this model achieves high power capacity, and consequently, contributes to reduce the thermal power compression.

Modelo de 8" de bajas y medias frecuencias. Utiliza un cono curvilíneo con el fin de obtener una respuesta lineal, unido a una suspensión de goma sintética para evitar los problemas inherentes a las tradicionales suspensiones de espuma de poliuretano, sujetas a un envejecimiento muy marcado y con unas características mecánicas inestables. Esto se traduce en una respuesta impulsional muy rápida y unas variaciones insignificantes de los parámetros del altavoz con el transcurso del tiempo, lo que redonda en unos graves nitidos y profundos, de gran impacto, y unos medios naturales y de gran definición.

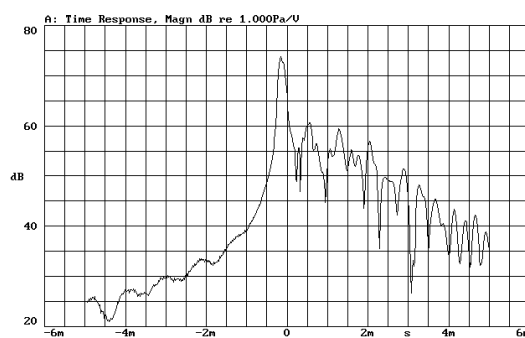
PREDICTED LOW FREQUENCY RESPONSE • Bass-reflex cabinet, Vb=40 l, fb=30.0 Hz



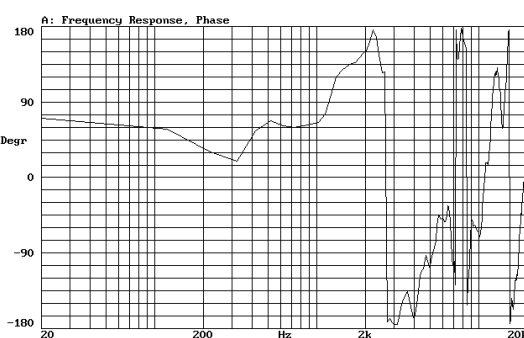
FREQUENCY RESPONSE & DISTORTION CURVES, MAGN. On axis, 1w @ 1m.



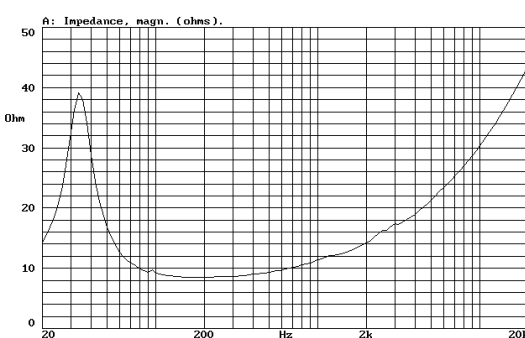
TIME RESPONSE, MAGN.



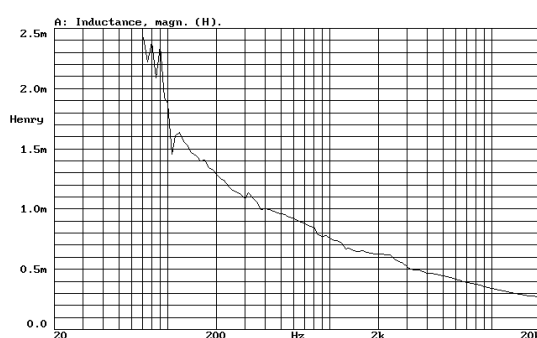
FREQUENCY RESPONSE, PHASE. On axis, 1w @ 1m.



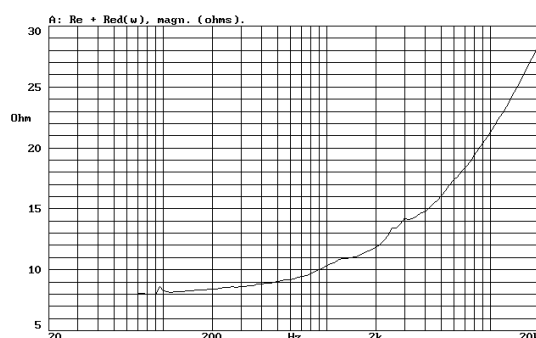
FREE AIR IMPEDANCE CURVE



VOICE COIL INDUCTANCE CURVE



Re + Red(w) CURVE

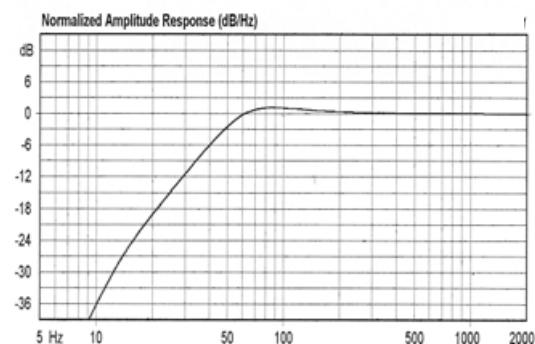


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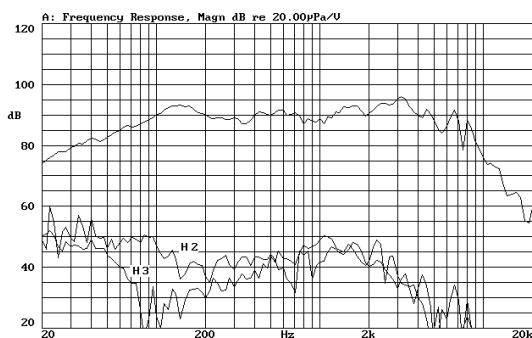
This 8" bass loudspeaker has its parameters optimised for a clean bass reproduction. It features a die cast aluminium basket, polypropylene cone with rubber surround and long excursion voice coil. This model may be fitted into bass-reflex or closed enclosures in high quality multi-way systems such as studio monitors and domestic cabinets.

Modelo de 8" con unas características excepcionales para alta fidelidad: membrana de polipropileno y suspensión de goma de gran elongación, chasis de aluminio fundido y estructura magnética de gran tamaño. El resultado son unos bajos de gran impacto y unos medios nítidos y naturales para recintos de tipo bass-reflex o herméticos.

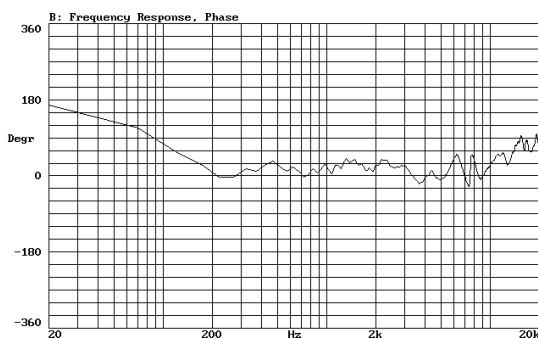
PREDICTED LOW FREQUENCY RESPONSE • Bass-reflex cabinet, Vb=25.00 l, fb=30.0 Hz



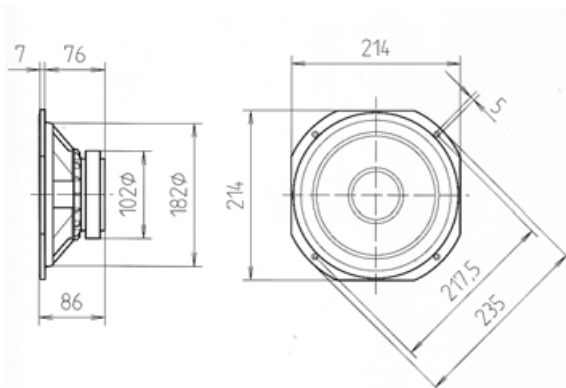
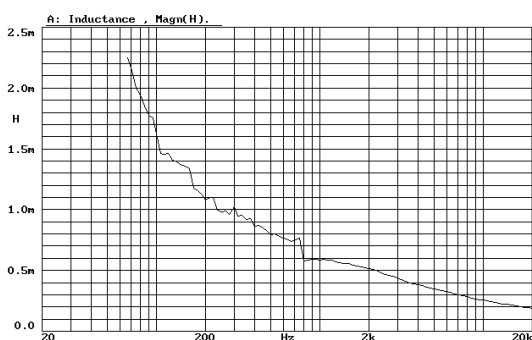
FREQUENCY RESPONSE & DISTORTION CURVES, MAGN. On axis, 1w @ 1m.



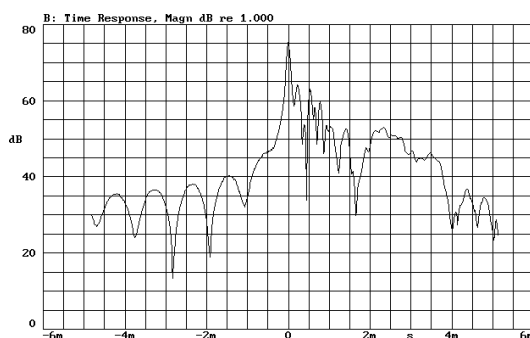
FREQUENCY RESPONSE, PHASE. On axis, 1w @ 1m.



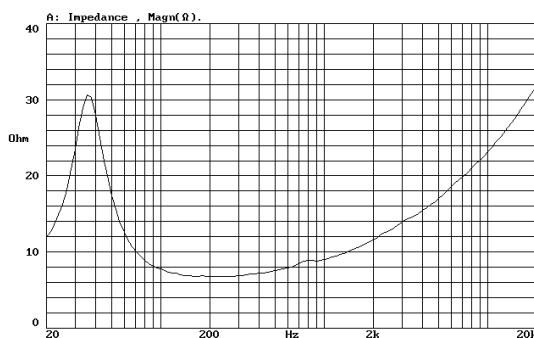
VOICE COIL INDUCTANCE CURVE



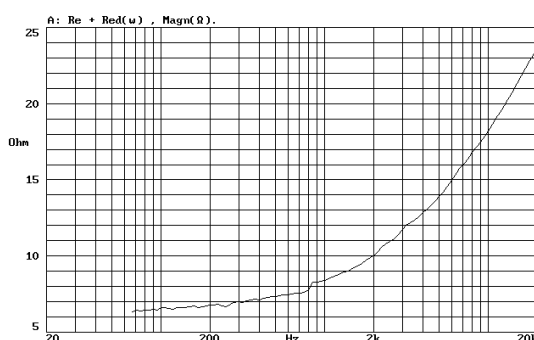
TIME RESPONSE, MAGN.



FREE AIR IMPEDANCE CURVE



Re + Red(w) CURVE



SPECIFICATIONS

Nominal diameter	200 mm. 8 in.
Rated impedance	8 ohms.
Power capacity*	50 w RMS
Program Power	100 Watts.
Sensitivity	92 dB, 2.83v @ 1m @ 2π
Frequency range	30-3500 Hz
Recom. enclosure vol.	20/50 l 0.7/1.77 ft. ³
Voice coil diameter	25.8 mm. 1 in.
Magnetic assembly weight	1 kg. 2.2 lb.
BL factor	7.1 N/A
Moving mass	0.02 kg.
Voice coil length	15 mm.
Air gap height	6 mm.
X damage (peak to peak)	20 mm.

MOUNTING INFORMATION

Overall dimensions	214 x 214 mm.
Bolt circle diameter	217.5 mm. 8.56 in.
Baffle cutout diameter:	
-Front mount	182 mm. 7.16 in.
-Rear mount	185 mm. 7.28 in.
Depth	86 mm. 3.38 in.
Volume displaced by driver	1.5 l 0.056 ft. ³
Net weight	1.5 kg. 3.3 lb.
Shipping weight	2.46 kg. 5.53 lb.

MATERIALS

Basket	Die Cast aluminium
Cone	Polypropylene
Surround	Rubber
Voice coil	Copper
Magnet	Ferrite

THIELE-SMALL PARAMETERS**

Resonant Frequency, fs	35 Hz
D.C. Voice Coil Resistance, Re	5.37 ohms.
Mechanical Quality Factor, Qms	2.33
Electrical Quality Factor, Qes	0.47
Total Quality Factor, Qts	0.38
Equivalent Air Volume to Cms, Vas	75 l
Mechanical Compliance, Cms	940.2 μm/N
Mechanical Resistance, Rms	1.97 kg/s
Efficiency, ηo (%)	0.6
Effective Surface Area, Sd(m ²)	0.022 m ²
Maximum Displacement, Xmax	4.5 mm.
Displacement Volume, Vd	100 cm. ³
Voice Coil Inductance, Le @ 1kHz	0.6 mH

NOTES

*The power capacity corresponds to the RMS maximum value that can dissipate the loudspeaker when a sinus signal is applied for a period of at least two hours.
Program power is defined as the transducer's ability to handle normal music program material.

** T-S parameters are measured after an exercise period using a preconditioning power test, using a velocity-current laser transducer, and will reflect the long term parameters, once the loudspeaker has been working for a short period of time.

NOTAS

*La potencia admisible corresponde a la máxima potencia RMS que puede disipar el altavoz durante al menos dos horas, cuando se le aplica una señal senoidal determinada.

Por potencia programa se entiende la capacidad del altavoz en el manejo de señales transitorias, como sería el proporcionado por el contenido de un pasaje musical normal.

* Los parámetros T-S han sido medidos después de un periodo de fatiga y estabilización de las suspensiones, mediante transductor laser de velocidad-corriente, y son el reflejo de los parámetros a largo plazo del altavoz, una vez éste haya sido instalado y haya trabajado en un corto espacio de tiempo.