

6 1/2" - HD-A - CONE DRIVER - 170 mm

4 Ω

CAR LINE

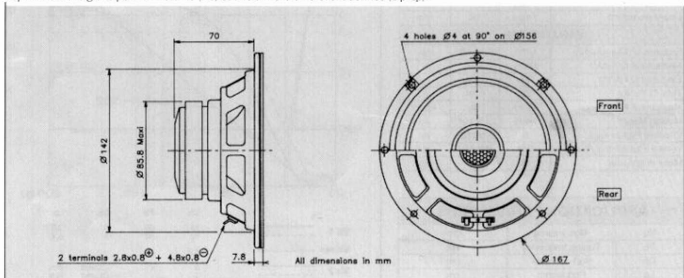
HD-A (High Definition Aerogel) cone
 Hi fi automotive application
 High loss rubber suspension
 High temperature voice coil
 Linear frequency response
 stamped steel chassis
 Vented pole piece
 Black passivated magnet structure

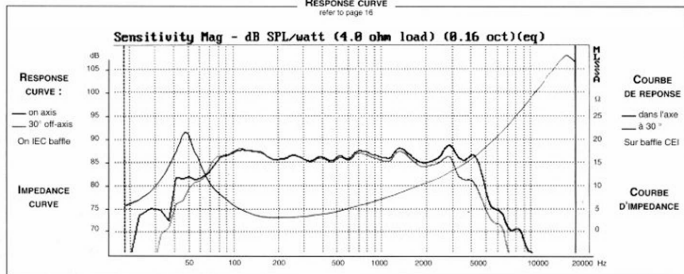
Cône Haute Définition Aéro-gel (HD-A)
 Application Hi Fi automobile
 Suspension caoutchouc amortissant
 Bobine haute température
 Courbe de réponse linéaire
 Châssis acier embouti
 Noyau ventilé
 Pièces polaires zinguées noires



HD-A represents a true breakthrough in loudspeaker cone technology, surpassing all conventional materials being used today. Through an extraordinary combination of newly developed materials and processes, Audax has created an innovative composite membrane whose properties are very close to ideal for making loudspeaker diaphragms. Ultra light, extremely rigid and maximized internal damping, this no-compromise cone is based on a totally controlled matrix of acrylic polymer gel in which an optimized proportion of Carbon and Kevlar fibers are embedded. An exclusive, proprietary process acts to perfectly align the fibers along the polymer chain. The procedure allows total control over the contour and weight of the cone, while making it possible to vary the thickness of the membrane along the profile. A vented pole piece and a black passivated magnet structure contribute to the best possible power handling and acoustic performance. The "suggested applications" charts indicate various driver loads. The response curves shown on the diagram indicate the predicted low end response of the driver in the suggested box volume (Vb) with suggested port (Dp-Lp).

Le cône HD-A constitue une véritable percée technologique dans ce domaine, surpassant tous les matériaux connus à ce jour. Par une extraordinaire association d'une nouvelle matière et d'un procédé original, Audax a créé une membrane composite, innovation dont les propriétés sont proches de l'idéal pour un transducteur à radiation directe. Ultra léger, extrêmement rigide et parfaitement amorti, ce cône sans compromis est constitué d'une matrice contrôlée de gel polymère acrylique enveloppant des fibres de Carbone et de Kevlar idéalement ordonnées. Un procédé exclusif Audax permet un alignement optimisé des fibres dans la chaîne du polymère. Le procédé procure un contrôle total du profil et du poids du cône, tout en offrant la possibilité de faire varier l'épaisseur à chaque endroit. Les pièces polaires zinguées noires ainsi que le noyau ventilé contribuent aux performances supérieures, tant du point de vue tenue en puissance, que de l'acoustique. Le tableau "Suggested applications" indique différents types de charge. Les courbes publiées correspondent à la réponse dans le grave pour un volume (Vb) et une dimension d'évent donnée (Dp-Lp).



RESPONSE CURVE
 refer to page 16


SPECIFICATIONS

Technical Characteristics	Symbol	Value	Units
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PRIMARY APPLICATION

Nominal Impedance	Z	4	Ω
Resonance Frequency	Fs	50	Hz
Nominal Power Handling	P	60	W
Sensitivity	E	87	dB

VOICE COIL

Voice coil diameter	\varnothing	30	mm
Minimum Impedance	Zmin	4	Ω
DC Resistance	Re	3.8	Ω
Voice Coil Inductance	Lbm	0.54	mH
Voice coil Length	h	12	mm
Former	-	Kapton	-
Number of layers	n	4	-

MAGNET

Magnet dimensions	\varnothing x h	84 X 15	mm
Magnet weight	m	0,31	kg
Flux density	B	1	T
Force factor	BL	5,2	NA ⁻¹
Height of magnetic gap	He	5	mm
Stray flux	Fmag	-	Am ¹
Linear excursion	Xmax	±3,5	mm

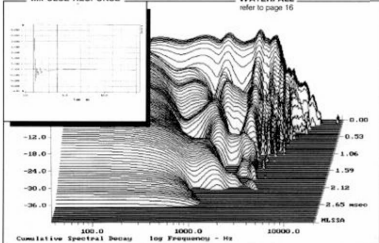
PARAMETERS

Suspension Compliance	Cms	$0,72 \cdot 10^{-3}$	mN ⁻¹
Mechanical Q Factor	Qms	4,07	-
Electrical Q Factor	Qes	0,64	-
Total Q Factor	Qts	0,56	-
Mechanical Resistance	Rms	1,12	kg s ⁻¹
Moving Mass	Mms	$14,9 \cdot 10^{-3}$	kg
Effective Piston Area	S	$1,39 \cdot 10^{-2}$	m ²
Volume Equivalent of Air at Cas	Vas	$19 \cdot 10^{-3}$	m ³
Mass of speaker	M	0,95	kg

APPLICATION PARAMETERS

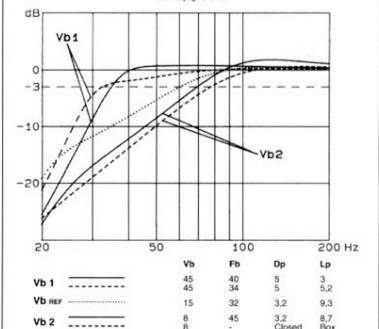
Vb	Box volume	dm ³
Fb	Tuning frequency	Hz
Dp	Port diameter	cm
Lp	Port length	cm

IMPULSE RESPONSE



SUGGESTED APPLICATIONS

refer to page 8 to 13



Please refer to method of measurement and measurement conditions pages 15 to 19.

Audax may, without prior notification modify the specifications on its products further to research and development requirements.