DRIVER
DH200E / DH200E-E*

The DH200E / DH200E-E* driver has a titanium diaphragm carefully designed to cover the frequency range from midrange to treble with high efficiency and low distortion.

This astonishing performance was achieved using titanium, a light and strong space age material that allows frequency reproduction from 1.5 to 20 kHz. This way, compact two-way systems can be designed for use as stage monitors, movie theatre systems and home theatre sound reproduction.

The driver must be used with active or passive crossover with crossover frequencies of 2 kHz or higher and a slope of at least 12 dB/oct.

The voice coil is made of high temperature wire wound on Kapton® former to withstand high operating temperatures.

A precisely engineered diaphragm structure and alignment mechanism allows for easy, reliable and cost effective repair in case of diaphragm failure.

DH200E-E: Product without Selenium label on the magnet structure.

SPECIFICATIONS

Nominal impedance	8	Ω
Minimum impedance @ 4,250 Hz	6.9	Ω
Power handling		
Musical Program (w/ xover 2,000 Hz 12 dB / oct)[1]	200	W
Sensitivity		
On horn, 2.83V@1m, on axis[2]	105	dB SPL
Frequency response @ -10 dB	1,500 to 20,000	Hz
Throat diameter	25 (1)	mm (in)
Diaphragm material		Titanium
Voice coil diameter	46 (1.8)	mm (in)
Re	5.8	Ω
Flux density	1.55	T
Minimum recommended crossover (12 dB / oct)	2,000	Hz

[1] Power handling specifications refer to normal speech and/or music program material, reproduced by an amplifier producing no more than 5% distortion. Power is calculated as true RMS voltage squared divided by the nominal impedance of the loudspeaker. This voltage is measured at the input of the recommended passive crossover when placed between the power amplifier and loudspeaker.
Musical Program= 2 x W RMS.
[2] Measured with HM17-25 horn, 1,500 - 8,000 Hz average.

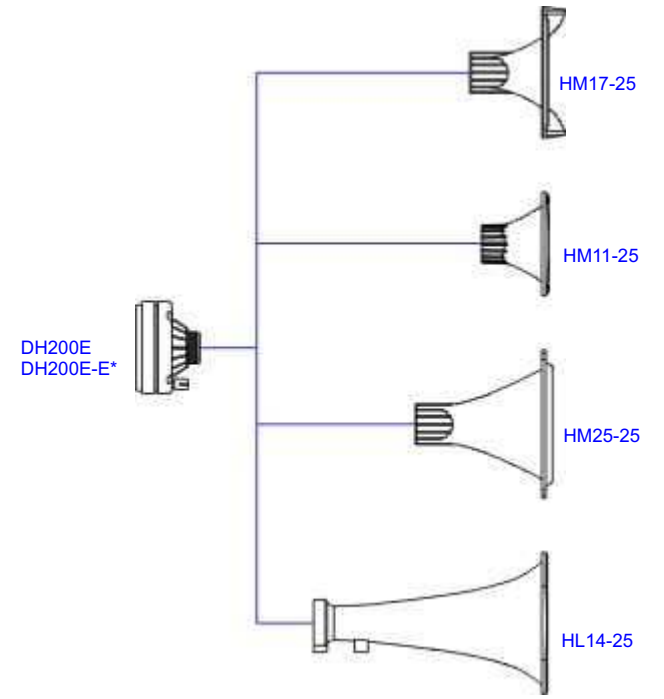
ADDITIONAL INFORMATION

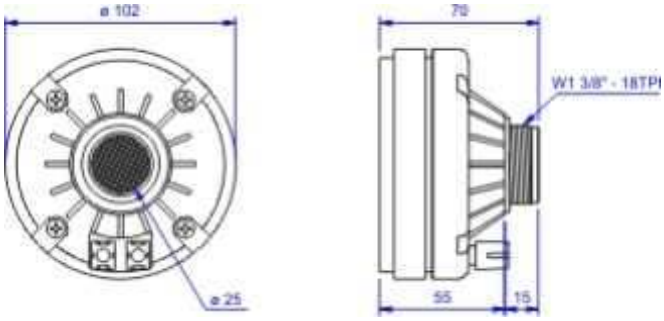
Magnet material		Barium ferrite
Magnet weight	429 (15)	g (oz)
Magnet diameter x depth	102 x 14 (4.02 x 0.55)	mm (in)
Magnetic assembly weight	1,200 (2.65)	g (lb)
Housing material		Plastic
Housing finish		Black
Voice coil material		Copper
Voice coil former material		Polyimide (Kapton®)
Voice coil winding length	2.8 (9.19)	m (ft)
Voice coil winding depth	2.2 (0.09)	mm (in)
Wire temperature coefficient of resistance (α_{25})	0.00380	1/°C
Volume displaced by driver	0.4 (0.014)	l (ft^3)
Net weight (1 piece)	1,350 (2.98)	g (lb)
Gross weight (6 pieces per carton)	8,400 (18.52)	g (lb)
Carton dimensions (W x D x H)	35.5 x 24 x 9 (14 x 9.5 x 3.5)	cm (in)

MOUNTING INFORMATION

Horn connection	Screw-on 1 3/8" - 18 TPI
Connectors	Push terminals
Polarity	Positive voltage applied to the positive terminal (red) gives diaphragm motion toward the throat

DRIVER x HORN CONNECTION





Dimensions in mm.

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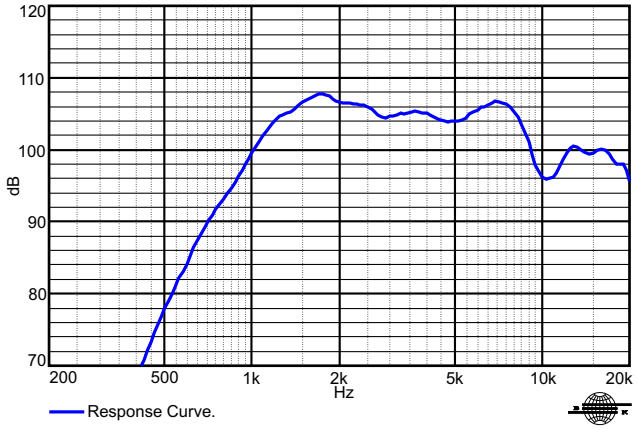
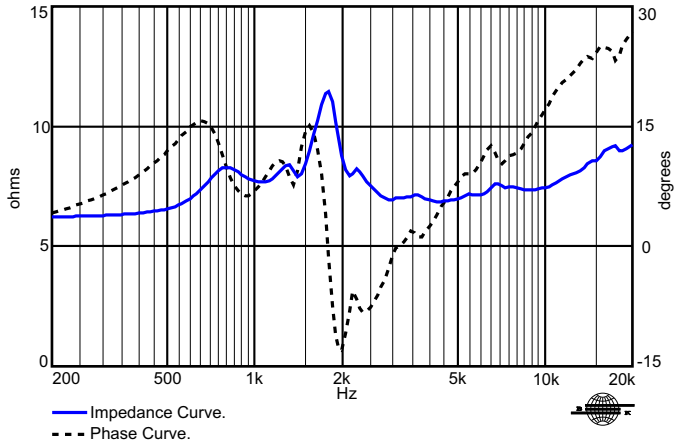
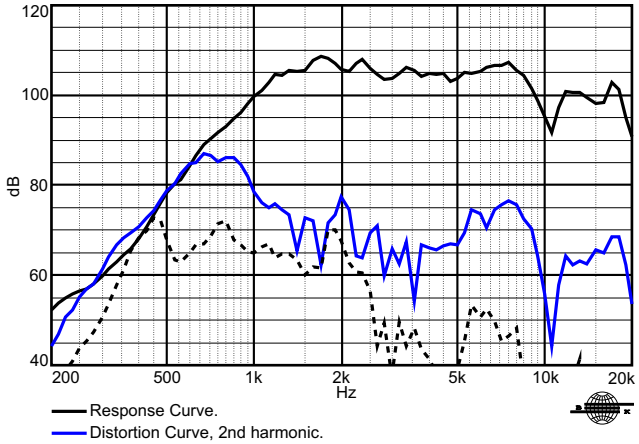
RESPONSE CURVE W/ HM17-25 HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m



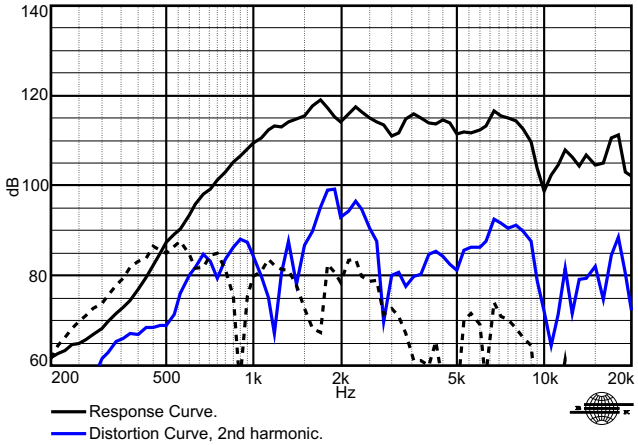
IMPEDANCE AND PHASE CURVES MEASURED W/ HM17-25 HORN IN FREE-AIR.



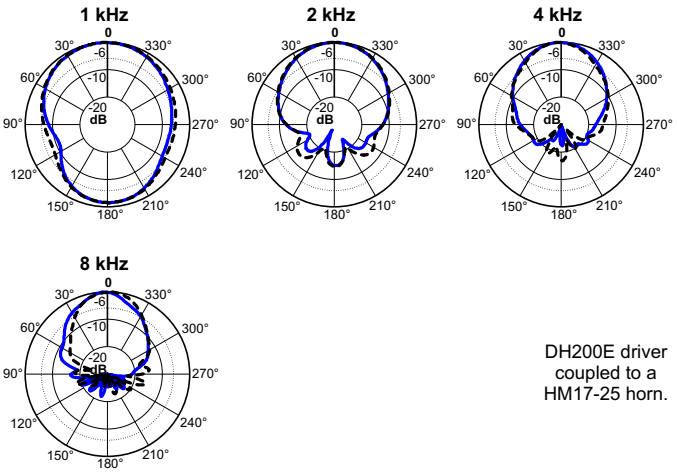
HARMONIC DISTORTION CURVES W/ HM17-25 HORN, 1 W / 1 m.



HARMONIC DISTORTION CURVES W/ HM17-25 HORN, 10 W / 1 m.



POLAR RESPONSE CURVES



DH200E driver coupled to a HM17-25 horn.

HOW TO CHOOSE THE RIGHT AMPLIFIER

The power amplifier must be able to supply twice the RMS driver power. This 3 dB headroom is necessary to handle the peaks that are common to musical programs. When the amplifier clips those peaks, high distortion arises and this may damage the transducer due to excessive heat. The use of compressors is a good practice to reduce music dynamics to safe levels.

FINDING VOICE COIL TEMPERATURE

It is very important to avoid maximum voice coil temperature. Since moving coil resistance (R_E) varies with temperature according to a well known law, we can calculate the temperature inside the voice coil by measuring the voice coil DC resistance:

$$T_B = T_A + \left(\frac{R_B}{R_A} - 1\right)\left(T_A - 25 + \frac{1}{\alpha_{25}}\right)$$

T_A , T_B= voice coil temperatures in °C.
R_A , R_B= voice coil resistances at temperatures T_A and T_B, respectively.
α_{25}= voice coil wire temperature coefficient at 25 °C.

Kapton®: Du Pont trademark.

Specifications subject to change without prior notice.

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