SELENIUM
LOUDSPEAKERS

PROFESSIONAL LINE - Driver

DH200E

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

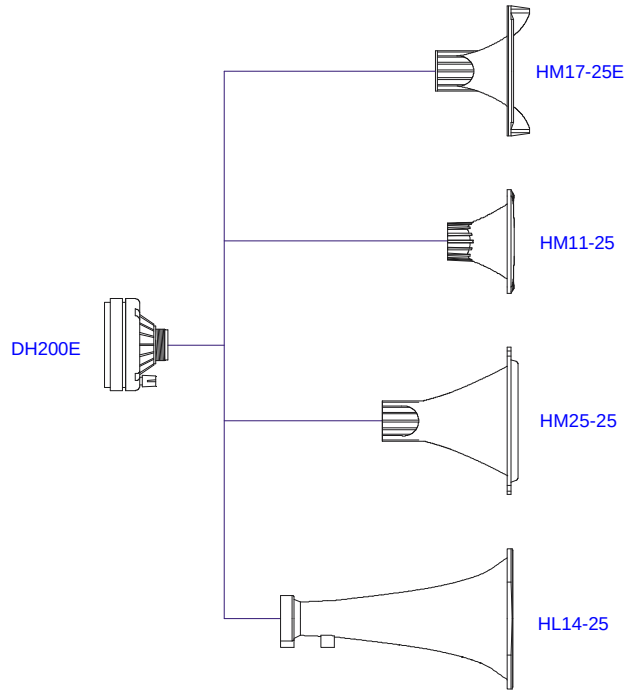
This astonishing performance was achieved using titanium, a light and strong space age material that allows frequency reproduction from 1.5 to 20 kHz. This way, compact two-way systems can be designed for use as stage monitors, movie theatre systems and home theatre sound reproduction.

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. We suggest the Selenium passive crossover LC12M2K8 (2,000 Hz - 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.

DRIVER x HORN CONNECTION



SPECIFICATIONS

Nominal impedance	8	Ω
Minimum impedance @ 4,250 H z	6.9	Ω
Power handling		
Musical Program(w/ xover 2,000 Hz 12 dB / oct)[1]	200	W
Sensitivity		
On horn,1W @ 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

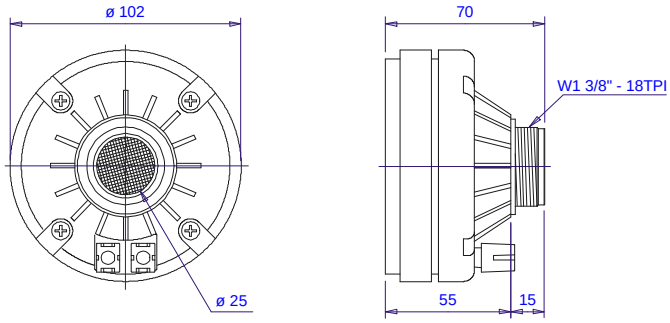
[1] Specifications to handle normal speech and music program material with 5% maximum acceptable distortion on amplifier, with the recommended passive crossover connected. Power is calculated taking into account the true RMS voltage at amplifier output along with transducer nominal impedance.
Musical Program= 2 x W RMS.
[2] Measured with HM17-25E 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	
Magnetic assembly steel finish	Zinc-plated	
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 (α25)	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)	c m (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



Dimensions in mm.

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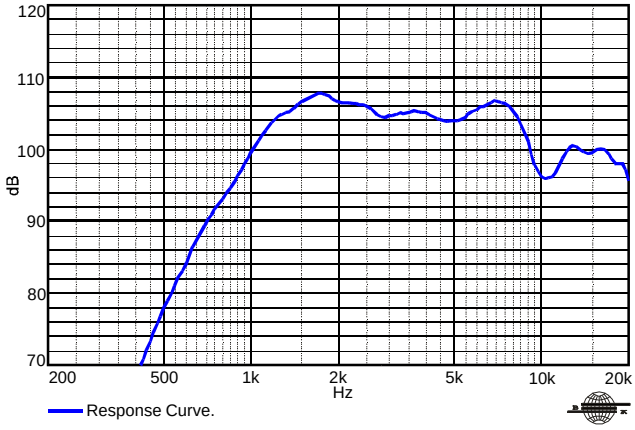
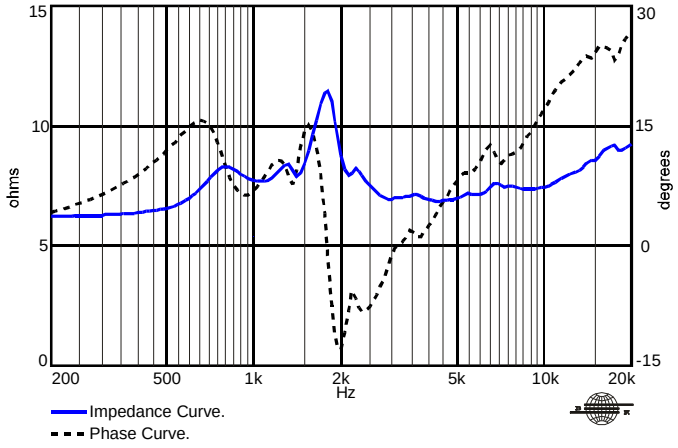
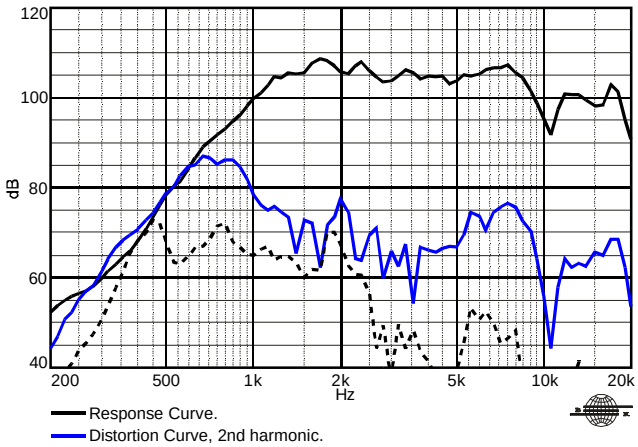
RESPONSE CURVE W/ HM17-25E HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m



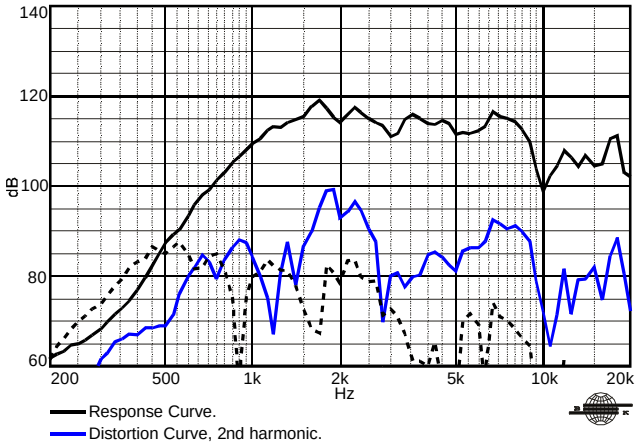
IMPEDANCE AND PHASE CURVES MEASURED W/ HM17-25E HORN IN FREE-AIR.



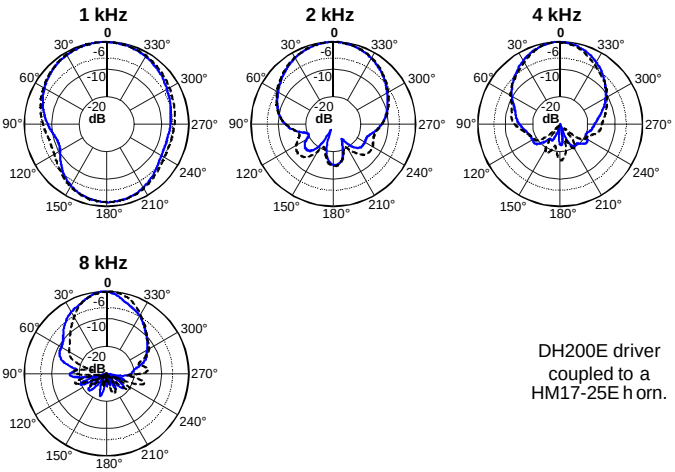
HARMONIC DISTORTION CURVES W/ HM17-25E HORN, 1 W / 1 m.



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



POLAR RESPONSE CURVES



DH200E driver coupled to a HM17-25E h orn.

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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