PHENOLIC DRIVER D200

D200 is a compression driver with a phenolic diaphragm designed for medium and high frequencies in accustic boxes for general sonorizations.

Principal features:

- Assembly without necessity of screws, providing great easiness in the eventual exchange of repair (RPD200) and guaranteeing bigger protection against humidity.
- Basket of synthetic material injected and high temperatures resistant.
- Throat 1" standard.
- Fabric diaphragm of poliamida with high humidity resistance.
- Voice coil with copper wire rolling up of high thermal resistance and body of Kapton®.

Kapton® - Trade mark Du Pont.

OBS.: In order to change the repair easily, ANY KIND OF CONNECTION THAT YOU WISH TO USE SHOULDN'T WELDED AT D200 TERMINAL'S DRIVER. This will cause the loose of the product's warranty. Selenium engineers suggest to use the faston connectors supplied.

SPECIFICATIONS

Nominal impedance	8	
Minimum impedance @ 489 Hz	6.4	
Power handling		
Musical Program(w/ xover 500 Hz 12 dB / oct)[1]	100	W
RMS (NBR 10.303)[1](w/ xover 500 Hz 12dB/oct)[2]	50	W
Sensitivity		
On horn, 2.83V@1m, on axis[3]	107	dB SPL
On plane-wave tube,0.0894V[4]	116	dB SPL
Frequency response @ -10 dB	500 to 7,000	Hz
Throat diameter	25 (1)	mm (in)
Diaphragm material	Phenolic	
Voice coil diameter	51 (2)	mm (in)
Re	6.0	
Flux density	1.0	T
Minimum recommended crossover (12 dB / oct)	500	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] Brazilian standard NBR 10.303, with pink noise during 2 uninterrupted hours.
[3] Measured with HL14-25 horn, 1,000 -3,500 Hz average.
[4] The sensitivity represents the SPL in a 25 mm terminated tube, 600 - 1,500 Hz average.

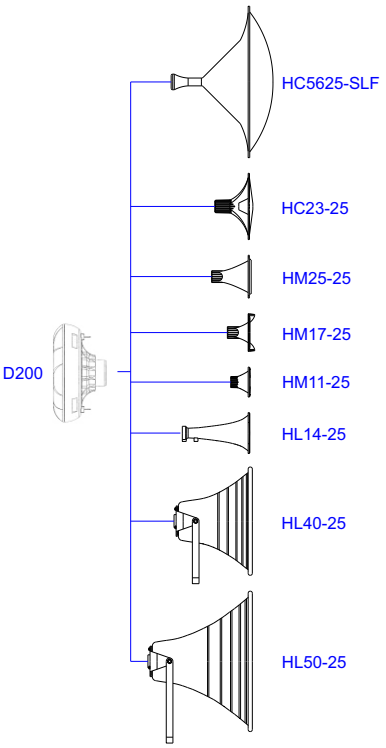
ADDITIONAL INFORMATION

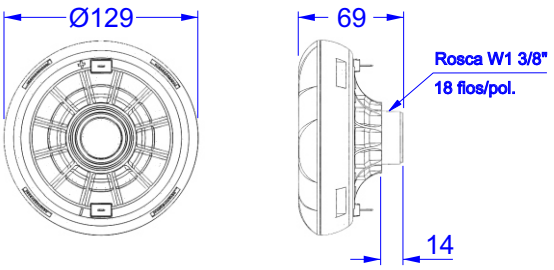
Magnet material	Barium ferrite	
Magnet weight	290 (10.2)	g (oz)
Magnet diameter x depth	102 x 10 (4.02 x 0.47)	mm (in)
Magnetic assembly weight	860 (1.89)	g (lb)
Housing material	ABS polymer	
Housing color	Black	
Voice coil material	Copper	
Voice coil former material	Polyimide (Kapton®)	
Voice coil winding length	5.7 (18.70)	m (ft)
Voice coil winding depth	3.0 (0.12)	mm (in)
Wire temperature coefficient of resistance ( )	0.00404	1/°C
Volume displaced by driver	0.5 (0.018)	l (ft^3)
Net weight	1,022 (2.24)	g (lb)
Gross weight	1,085 (2.38)	g (lb)
Carton dimensions (W x D x H)	13.5 x 13.5 x 0.8 (5.3 x 5.3 x 3.2)	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

CONEXÃO DRIVER x CORNETA

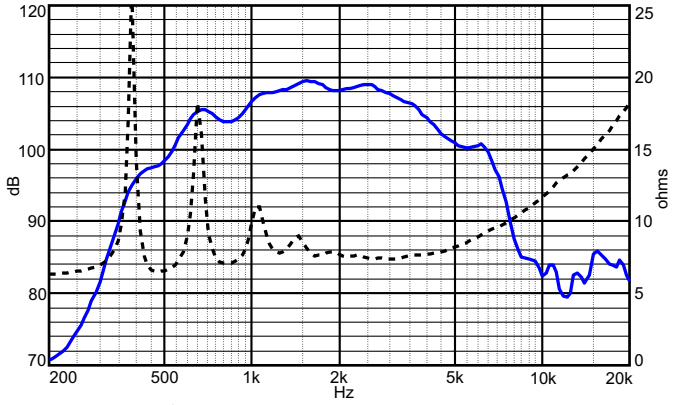




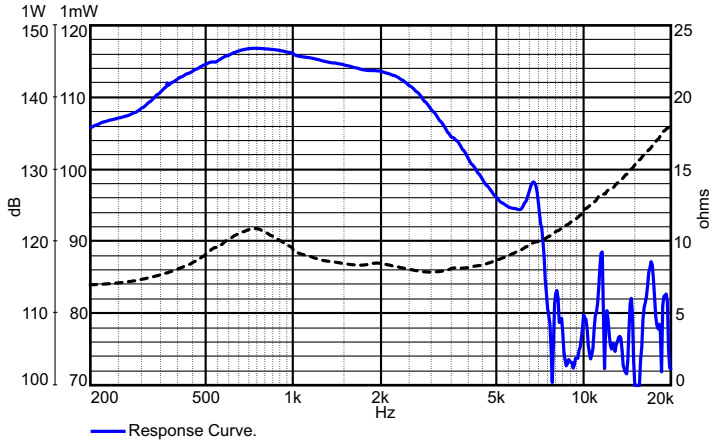
Dimensions in mm.

PHENOLIC DRIVER
D200

RESPONSE AND IMPEDANCE CURVES W/ HL14-25 HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m

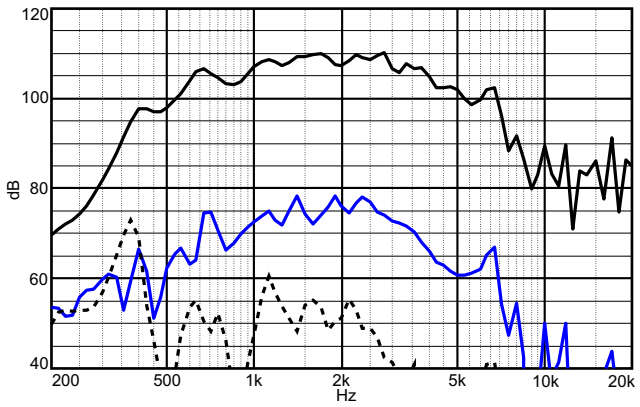


RESPONSE AND IMPEDANCE CURVES W/ PLANE-WAVE TUBE, 1 mW

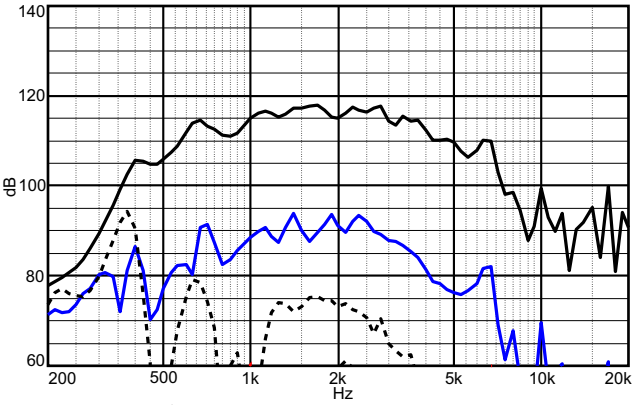


Frequency response and impedance curves measured with 25 mm terminated plane-wave tube.

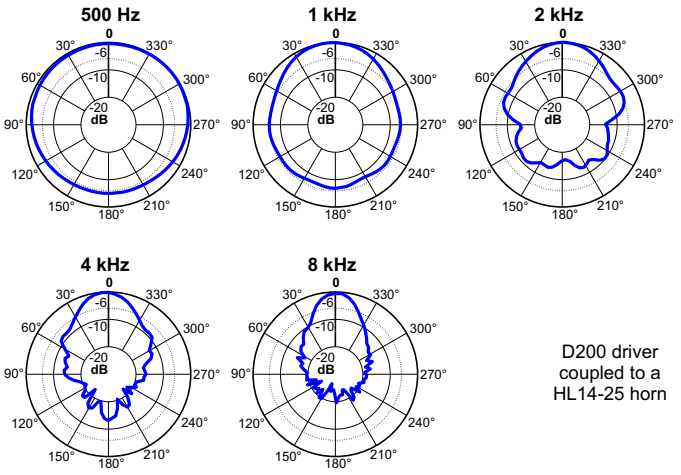
HARMONIC DISTORTION CURVES W/ HL14-25 HORN, 1 W / 1 m.



HARMONIC DISTORTION CURVES W/ HL14-25 HORN, 5 W / 1 m.



POLAR RESPONSE CURVES



D200 driver coupled to a HL14-25 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:

$$T_B \quad T_A \quad \frac{R_B}{R_A} \quad 1 \quad T_A \quad 25 \quad \frac{1}{25}$$

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