SELENIUM
LOUDSPEAKERS

PROFESSIONAL LINE - Compression Driver

D210Ti

A high quality full range compression driver, is the driver of choice for high performance, high value professional systems. The titanium diaphragm assures high sensitivity, low distortion and smooth, extended frequency response.

It is highly recommended for use in monitor speakers, stage monitors and surround speakers in movie theaters.

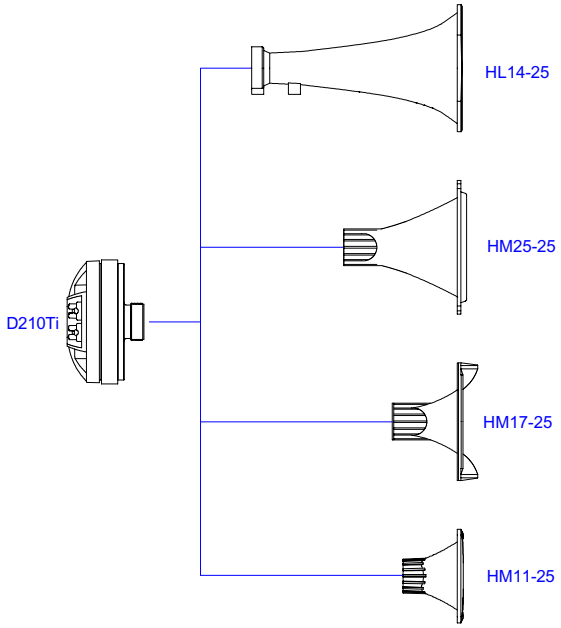
The following highlights the exceptional features of the D210Ti:

- titanium dome diaphragm combining a stable structure for mid-frequency reproduction with a low mass, enabling outstanding high frequency reproduction up to 20 kHz;

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

- 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 @ 2,900 Hz	7.3	Ω
Power handling		
Musical Program (w/ xover 1,500 Hz 12 dB / oct)[1]	120	W
Musical Program (w/ xover 2,000 Hz 12 dB / oct)[1]	160	W
Sensitivity		
On horn, 2.83V@1m, on axis[2]	107	dB SPL
Frequency response @ -06 dB	800 to 20,000	Hz
Throat diameter	25 (1)	mm (in)
Diaphragm material		Titanium
Voice coil diameter	44 (1.7)	mm (in)
Re	6.0	Ω
Flux density	1.6	T
Minimum recommended crossover (12 dB / oct)	2,000	Hz

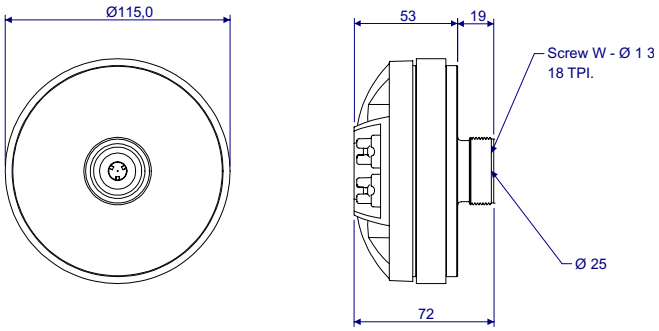
[1] Power handling specifications refer to normal speech and/or music program material, reproduced by an amplifier producing no more than 5% distortion. Power is calculated as true RMS voltage squared divided by the nominal impedance of the loudspeaker. This voltage is measured at the input of the recommended passive crossover when placed between the power amplifier and loudspeaker.
Musical Program= 2 x W RMS.
[2] Measured with HL14-25 horn, 1,200 - 15,000 Hz average.

ADDITIONAL INFORMATION

Magnet material		Barium ferrite
Magnet weight	666 (23.5)	g (oz)
Magnet diameter x depth	115 x 15 (4.52 x 0.59)	mm (in)
Magnetic assembly weight	1666 (3.67)	g (lb)
Housing material		Plastic
Housing finish		Black
Magnetic assembly steel finish		E-Coating
Voice coil material		CCAW
Voice coil former material		Polyimide (Kapton®)
Voice coil winding length	3.5 (11.48)	m (ft)
Voice coil winding depth	3.6 (0.14)	mm (in)
Wire temperature coefficient of resistance (α25)	0.00435	1/°C
Volume displaced by driver	0.5 ()0.017	l (ft^3)
Net weight	1,727 (3.80)	g (lb)
Gross weight	1,812 (3.99)	g (lb)

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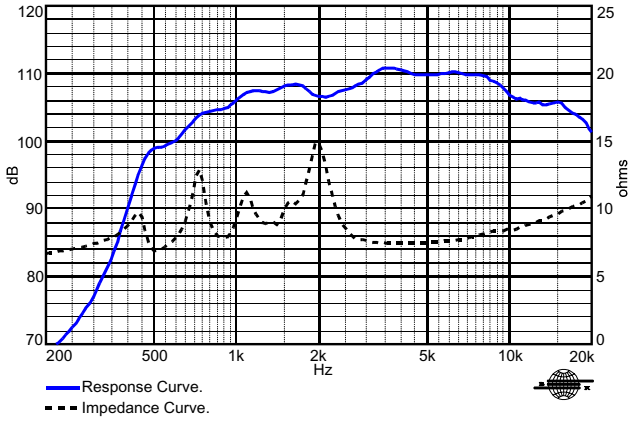
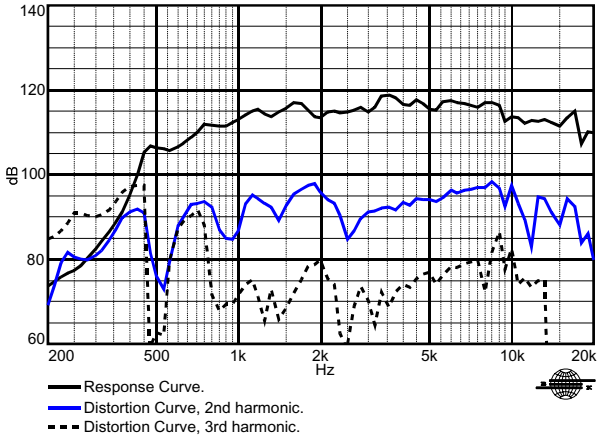
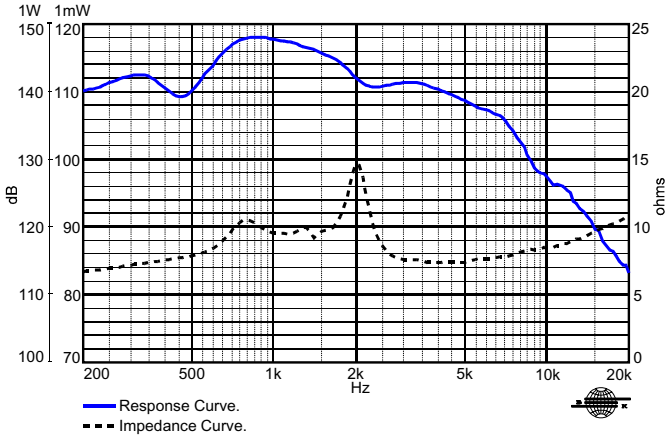
RESPONSE AND IMPEDANCE CURVES W/ HL14-25 HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m



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

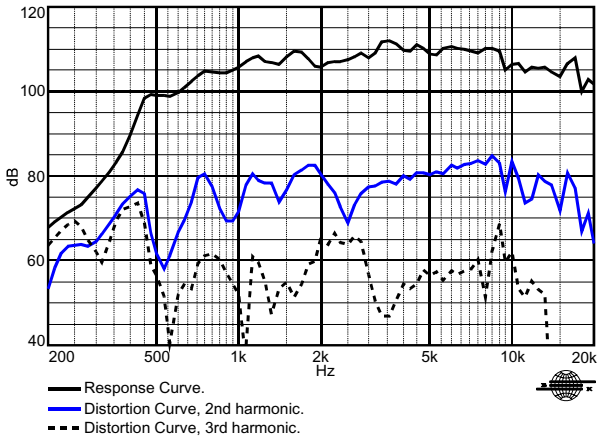


RESPONSE AND IMPEDANCE CURVES W/ PLANE-WAVE TUBE, 1 mW



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

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



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.
Ferrosound®: Ferrofluidics Corporation trademark.

Specifications subject to change without prior notice.
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