TITANIUM DRIVER
D2500Ti-Nd

The D2500Ti-Nd model is an ultra high quality compression driver for professional use wherever high SPL and low distortion are of great concern.

Pure titanium specially designed diaphragm with IPF® (Impregnated Polymer Fiber) surround, has structured type snow flake for high sensitivity, low distortion and smooth extended frequency response applications.

The D2500Ti-Nd is recommended for use in arenas, stage monitors, side fills and sound reinforcement systems.

Injected phase plug in engineering plastic, optimized to eliminate undesirable phase cancellation problems.

High flux density magnetic assembly with Neodymium ring and aluminium shorting ring that lowers distortion and reduces the voice coil self-inductance.

Voice coil manufactured in CCAW (copper clad aluminum wire) uses a high temperature Polyimide former.

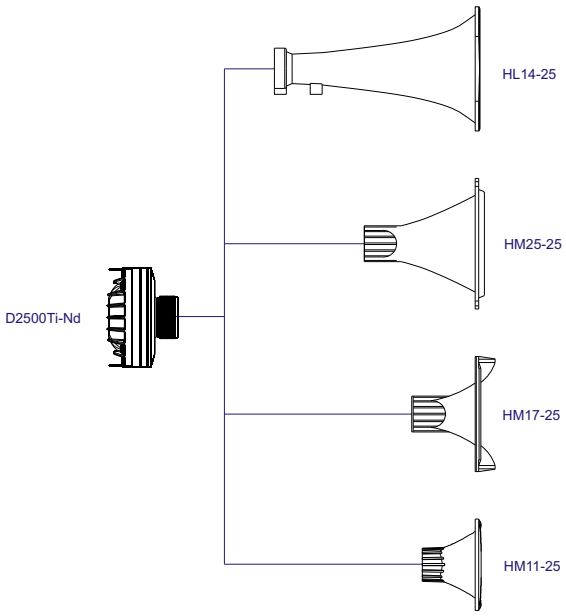
Precisely engineered diaphragm structure and alignment mechanism allow for easy, reliable and cost effective repair in case of diaphragm failure (RPD 220Ti).

In the rare case a repair may be necessary, please read carefully the instructions supplied and be sure to correctly follow the items step by step.

Model D2500 Ti Nd uses standard 1 $^{3}/_{8}$" screw - 18 threads per inches,for better with Selenium horns.

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.

DRIVER x HORN CONNECTION



SPECIFICATIONS

Nominal impedance	8	Ω
Minimum impedance @ 5,500 Hz	6.98	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]	111	dB SPL
On plane-wave tube, 0.0894V[3]	116	dB SPL
Frequency response @ -6 dB	1,000 to 22,000	Hz
Throat diameter	25 (1)	mm (in)
Diaphragm material	Titanium	
Voice coil diameter	44 (1.7)	mm (in)
Re	6.0	Ω
Flux density	1.80	T
Minimum recommended crossover (12 dB / oct)	1,500	Hz

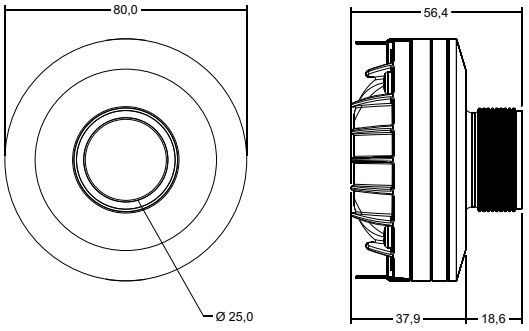
[1] Power handling specifications refer to normal speech and/or music program material, reproduced by an amplifier producing no more than 5% distortion. Power is calculated as true RMS voltage squared divided by the nominal impedance of the loudspeaker. This voltage is measured at the input of the recommended passive crossover when placed between the power amplifier and loudspeaker.
Musical Program= 2 x W RMS.
[2] Measured with HL14-50 horn, 1,000 - 20,000 Hz average.
[3] The sensitivity represents the SPL in a 25 mm terminated tube, 800 - 2,000 Hz average.

ADDITIONAL INFORMATION

Magnet material	Neodymium	
Magnet weight	115(4.05)	g (oz)
Magnet diameter x depth	80 x 5 (3.15 x 0.19)	mm (in)
Magnetic assembly weight	650(1.43)	g (lb)
Housing material	Aluminum	
Voice coil material	CCAW	
Voice coil former material	Polyimide (Kapton®)	
Voice coil winding length	2.6 (8.53)	m (ft)
Voice coil winding depth	2.7 (0.106)	mm (in)
Wire temperature coefficient of resistance ($\alpha 25$)	0.00404	1/°C
Volume displaced by driver	0.2(0.00706)	l (ft^3)
Net weight	730 (1.6)	g (lb)
Gross weight	760(1.7)	g (lb)
Carton dimensions (W x D x H)	9x9x9 (3.5x 3.5x3.5)	cm (in)

MOUNTING INFORMATION

Horn connection	Screw-on 1 $^{3}/_{8}$" - 18 TPI
Connectors	Faston
Polarity	Positive voltage applied to the positive terminal (red) gives diaphragm motion toward the throat



Dimensions in mm.

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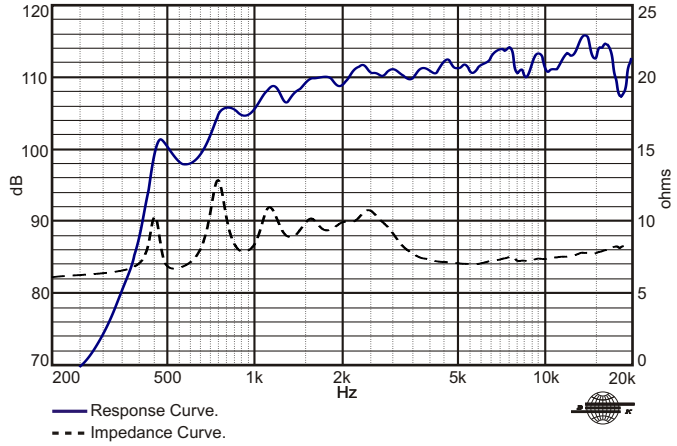
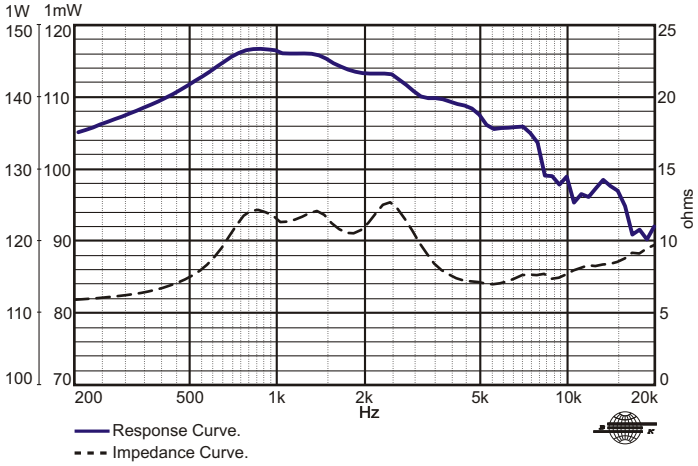
RESPONSE AND IMPEDANCE CURVES W/ HL14-25 HORN INSIDE AN ANECHOIC CHAMBER, 1 W / 1 m

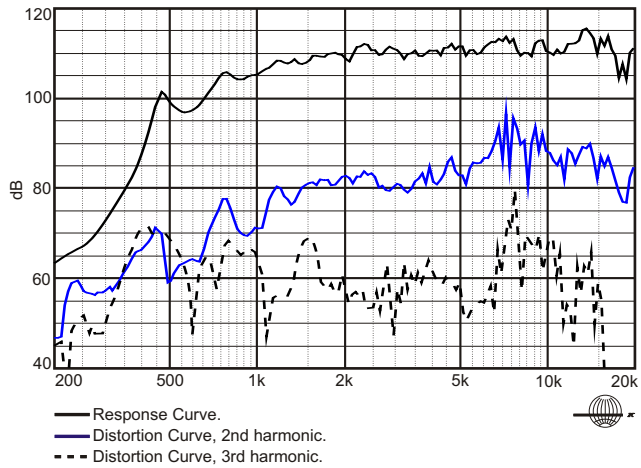


RESPONSE AND IMPEDANCE CURVES W/ PLANE-WAVE TUBE, 1 mW

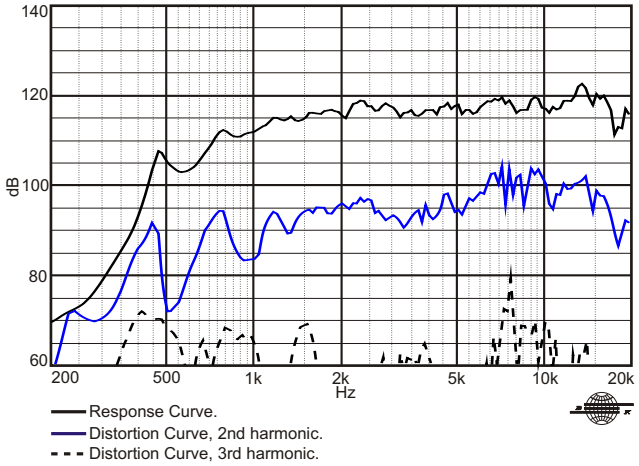


Frequency response and impedance curves measured with 50 mm terminated plane-wave tube, with sensitivity referenced to a 25 mm tube.

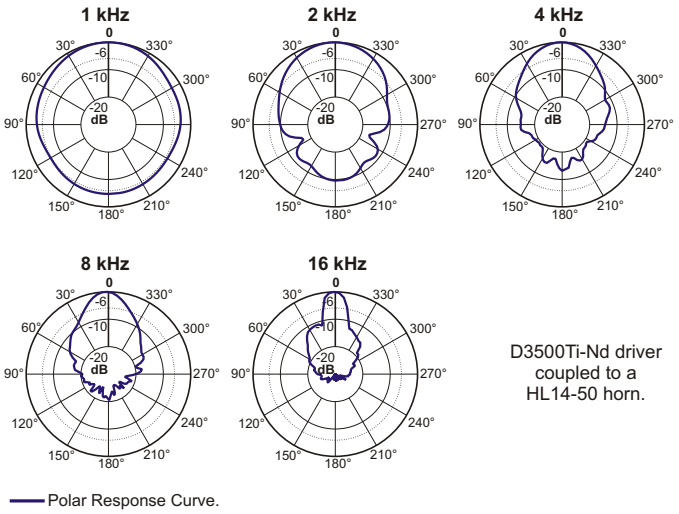
HARMONIC DISTORTION CURVES W/ HL14-25 HORN, 1 W / 1 m.



HARMONIC DISTORTION CURVES W/ HL14-25 HORN, 7.5 W / 1 m.



POLAR RESPONSE CURVES



D3500Ti-Nd driver coupled to a HL14-50 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.

DPD® (Driver Protection Device): Selenium trademark.
IPF® (Impregnated Polymer Fiber): Selenium trademark.

Specifications subject to change without prior notice.

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