3570NdS (Design in progress)

10 inches bass driver

Nominal Diameter	**10 " / 25 cm**
Rated Impedance	**8 q**
Sensitivity	**96 dB SPL**
Power Handling Capacity	**300 W AES**
SPL max (continuous)	**118 dB SPL**
Usable frequency range	**40 - 3000 Hz**
Speaker net mass	**4.1 kg**

Architecture highlights :

- Noiseless natural convection Intercooling System
- Neodymium magnet system with symmetric BL(x) and Le(x)
- Dual side coated diaphragm

Motor architecture

Magnet material	-	Nd
Voice coil diameter	mm	64
Voice coil length	mm	18
Air gap height	mm	10

Typical characteristics

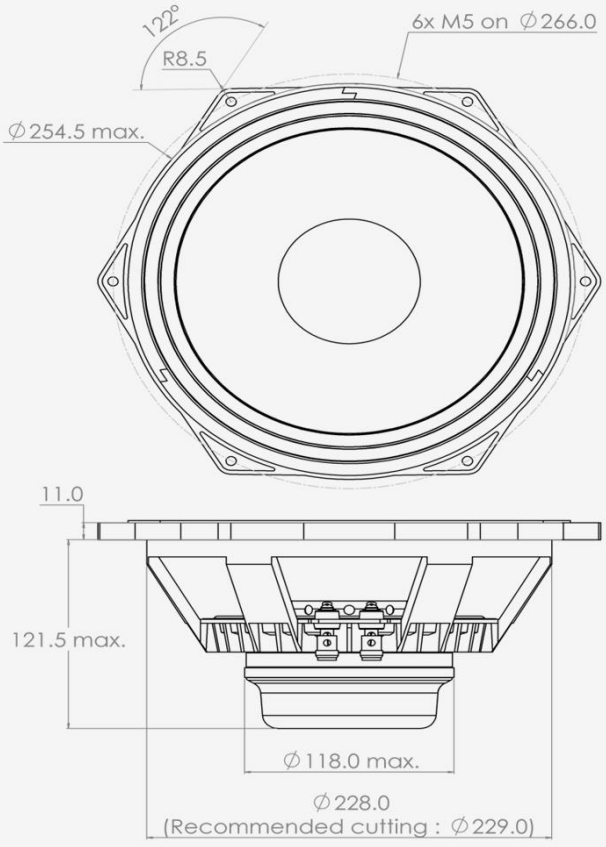
Rated impedance	Z	Ω	8
Half space sensitivity (1W@1m)	-	dB SPL	96.0
Usable freq. range	-	Hz	40 - 3000
Power handling capacity (AES)	-	W	300
Max Sound Pressure Level	SPL_{max}	dB SPL	118
Min. impedance modulus	Z_{min}	Ω@Hz	7.4@300
Voice-coil inductance @ 1kHz	Le_{1k}	mH	1.616
Voice-coil inductance @ 10kHz	Le_{10k}	mH	0.679
BL product	BL	N/A	20.8
Moving mass	Mms	kg	0.0490

Thiele-Small parameters

Resonance frequency	Fs	Hz	53 (±7)
DC Resistance	Re	Ω	5.4 (±0.5)
Mechanical quality factor	Qms	1	3.62
Electrical quality factor	Qes	1	0.20
Total quality factor	Qts	1	0.19
Suspension compliance	Cms	10^{-6}.m/N	180
Effective piston area	Sd	m^2	0.0356
Equivalent Cas air load	Vas	m^3	0.0333
Max linear excursion	Xmax	mm	± 6.5
Linear displacement volume	Vd	$10^{-3}.m^3$	0.2316
Reference efficiency	η_0	%	2.4
Unity load volume	$Vas.Qts^2$	$10^{-3}.m^3$	1.2

Absolute maximum ratings

Short term max. input voltage	Vmax	V	100
Max.excursion before damage	Xdam	mm	± 14.0
Ambient operating temperature	Ta	°C	-10 to +50
Storage temperature		°C	-20 to +70
Environmental withstanding			Tropical



Mounting information

Air volume occupied by the driver	$10^{-3}.m^3$	1.10
Speaker net mass	kg	4.10
Baffle cut-out diameter (front mounting)	mm	229.0
Bolt number & Metric diameter	-	6x M5
Bolt circle diameter	mm	266.0
Max overall dimension (on ears)	mm	283.5
Max overall dimension (out of ears)	mm	254.5
Flange height	mm	11.0
Max magnet diameter	mm	118.0
Max depth (front mounting)	mm	121.5
Recommended reflex box	Lts / Hz	-
Electrical connection		Ø4 mm Push buttons

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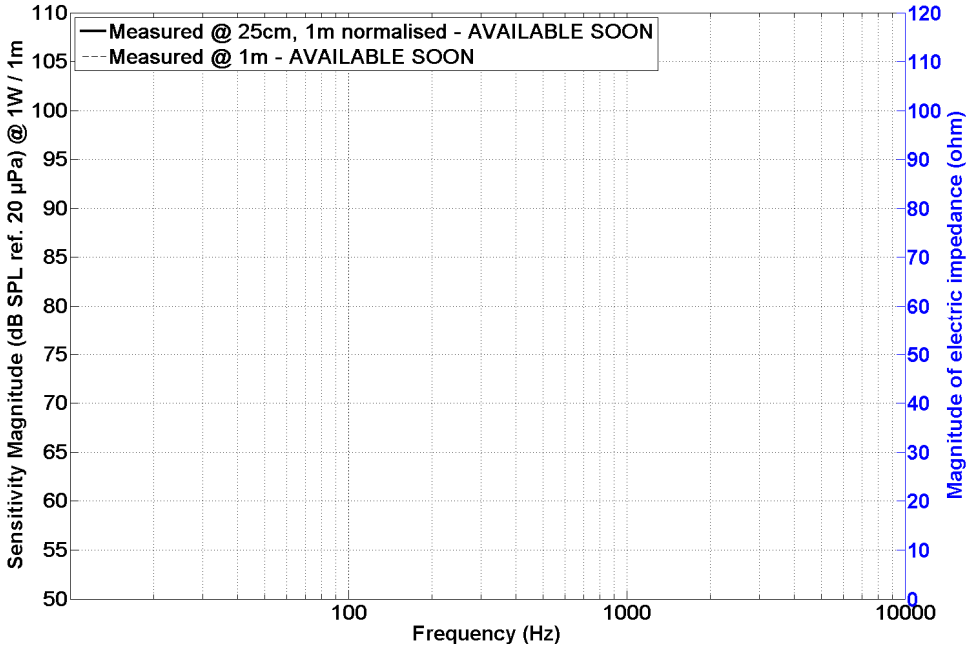
SPL curves measured on CEI standard baffle :

. at 25 cm, normalised 1 m

. at 1 m for reference

. Graph amplitude = 60 dB (PHL Audio standard)

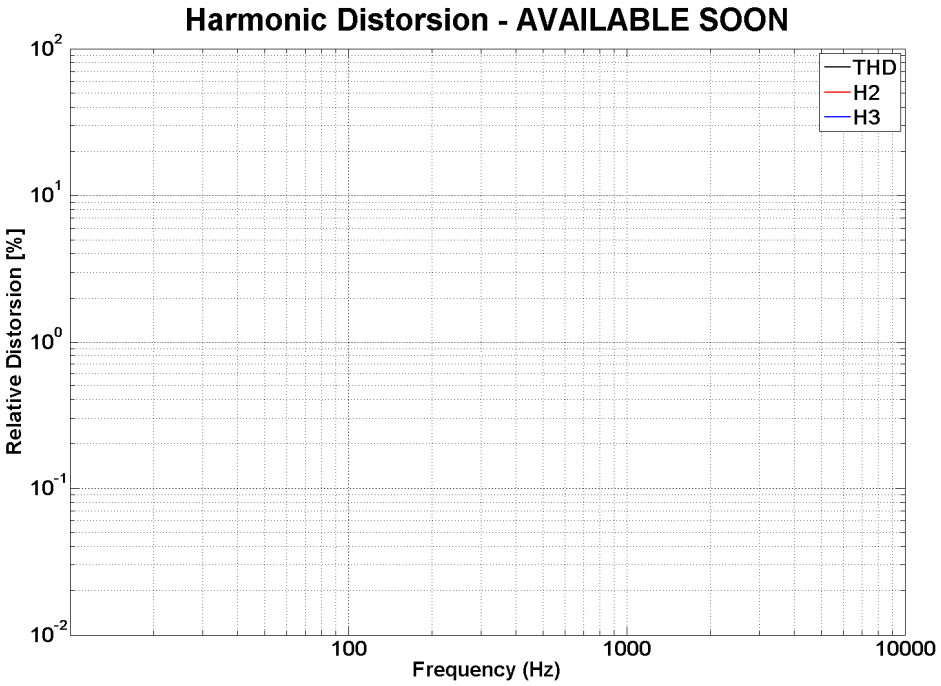


HD curve measured on CEI standard baffle :

. at 1 meter

. at power = P_AES / 4

. Graph amplitude 0.01 % to 100 % (PHL Audio standard for P_AES/4)



Non linear curves measured thanks to Klippel software and hardware, in free air