

Model Number: HDS-P830875  
Product Line: Peerless Gold

Revision: Rev 1\_0  
Date: 9-Sep-09

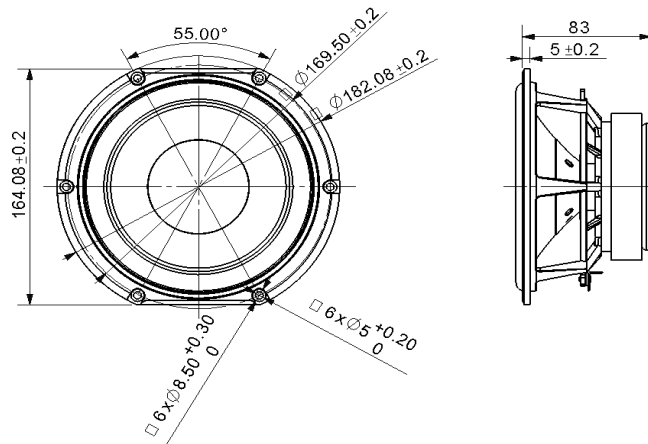


### Product Description:

This 6.5 inch 8 ohm driver is a member of the high performance HDS family. A powerful ferrite magnet system is coupled to a finite element analysis designed suspension system, containing both a linear spider design and a rubber surround. The motor contains an aluminium shorting ring, which reduces coil inductance, thus providing both extended frequency response performance and reduced distortion. The long-throw voice coil ensures linear high excursion performance, needed for signal clarity. The cone necks are vented so as to reduce air compression effects under high excursion conditions. The cast aluminium basket offers structural rigidity, heat sinking capacity for the motor, and additional air venting under the spider so as to again reduce air compression effects. The cone in this model is nomex based, offering a unique visual and acoustic experience.



### Mechanical 2D Drawing:

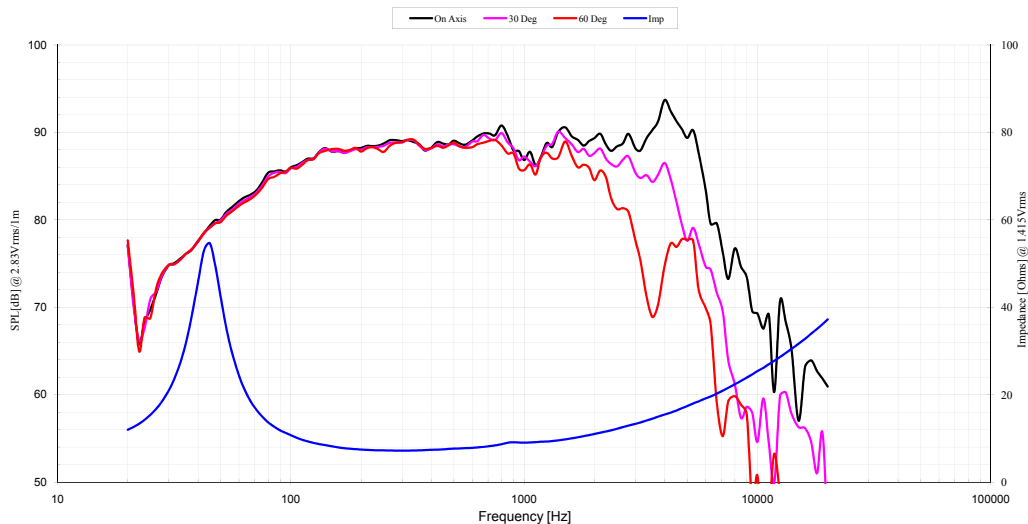


### Specifications:

DC Resistance	$R_{\text{evc}}$	$\Omega$	6.4	5.0%	Energy Bandwidth Product	EBP	$(1/Q_{\text{es}})f_s$	113
Minimum Impedance	$Z_{\text{min}}$	$\Omega$	7.2	7.5%	Moving Mass	$M_{\text{ms}}$	g	15.94
Voice Coil Inductance	$L_e$	mH	0.41		Suspension Compliance	$C_{\text{ms}}$	um/N	756.8
Resonant Frequency	$f_s$	Hz	46	15.0%	Effective Cone Diameter	D	cm	13.5
Mechanical Q Factor	$Q_{\text{ms}}$	-	3.2		Effective Piston Area	$S_D$	cm <sup>2</sup>	143.1
Electrical Q Factor	$Q_{\text{es}}$	-	0.41		Equivalent Volume	$V_{\text{as}}$	L	21.78
Total Q Factor	$Q_{\text{ts}}$	-	0.36		Motor Force Factor	BL	T·m	8.47
Ratio $f_s / Q_{\text{ts}}$	F	$f_s / Q_{\text{ts}}$	127		Motor Efficiency Factor	$\beta$	$(T \cdot m^2) / \Omega$	11.27
Half Space Sensitivity @ 2.83V	$\text{dB} @ 2.83V/1m$	dB	88.6	$\pm 1.0^1$	Voice Coil Former Material	$VC_{\text{fm}}$	-	Aluminum
Sensitivity @ 1W/1m	$1W/1m$	dB	88.9	$\pm 1.0^1$	Voice Coil Inner Diameter	$VC_{\text{id}}$	mm	32.4
					Gap Height	Gh	mm	6.0
Rated Noise Power (IEC 2685 18.1)	P	W	75		Maximum Linear Excursion	$X_{\text{max}}$	mm	5.34
Test Spectrum Bandwidth	40Hz - 3kHz	12 dB/Oct			Ferofluid Type	FF	N/A	
					Transducer Size	-	inch	6.5
					Transducer Mass	-	kg	1.56

1 - Piston Band Sensitivity Tolerance

### Frequency and Impedance Response:



F088-0713A