

Model Number: XLS-P830500
Product Line: Peerless Platinum

Revision: Rev 1_0
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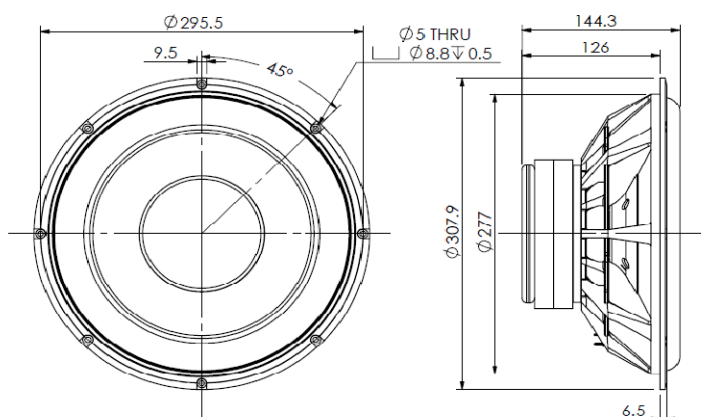


Product Description:

This 12 inch 4 ohm member of the XLS product family has all the design features suitable for a high performance subwoofer driver. The motor features a double ferrite magnet motor, supporting high excursion, and aluminium shorting rings and pole extenders, lowering and linearizing the inductance of the overhung voice coil. The paper cone is vented under the dust cap, to reduce air compression. The suspension system features a low-creep rubber surround, and a nomex spider, ensuring long-term reliability under high power conditions. The product also features a rigid cast aluminium basket.



Mechanical 2D Drawing:



Specifications:

DC Resistance	R_{eVC}	Ω	3.6	5.0%	Energy Bandwidth Product	EBP	$(1/Q_{es}) \cdot f_s$	78
Minimum Impedance	Z_{min}	Ω	5.3	10.0%	Moving Mass	M_{ms}	g	193.9
Voice Coil Inductance	L_e	mH	0.70		Suspension Compliance	C_{ms}	um/N	317
Resonant Frequency	f_s	Hz	20	15.0%	Effective Cone Diameter	D	cm	24.80
Mechanical Q Factor	Q_{ms}	-	4.44		Effective Piston Area	S_D	cm ²	483.1
Electrical Q Factor	Q_{es}	-	0.26		Equivalent Volume	V_{as}	L	103.862
Total Q Factor	Q_{ts}	-	0.24		Motor Force Factor	BL	T-m	18.53
Ratio f_s / Q_{ts}	F	f_s / Q_{ts}	82		Motor Efficiency Factor	β	$(T \cdot m^2) / \Omega$	96.15
Half Space Sensitivity @ 2.83V	dB@2.83V/1m	dB	87.4	± 1.0 ¹	Voice Coil Former Material	VC _m	-	BASV
Sensitivity @ 1W/1m	1W/1m	dB	84.4	± 1.0 ¹	Voice Coil Inner Diameter	VC _d	mm	51.32
					Gap Height	Gh	mm	8.00
Rated Noise Power (IEC 2685 18.1)	P	W	300		Maximum Linear Excursion	X_{max}	mm	12.50
Test Spectrum Bandwidth	20Hz - 1kHz		12 dB/Oct		Ferrofluid Type	FF		N/A
					Transducer Size	-	inch	12
					Transducer Mass	-	Kg	6.08

1 - Piston Band Sensitivity Tolerance

Frequency and Impedance Response:

