



XXLS 12" Subwoofer



Type Number: 830847

Features:

This new series of state-of-the-art subwoofers continue to enhance Peerless' reputation for delivering the highest quality components for bass in the world. Called the XXLS - for "Xpanded Extra Long Stroke" - these new audio transducers add even more excursion to the Peerless XLS line, and completely eliminate distortion.

Driver Highlights: Thick Nomex cone, 51 mm voice coil, ALP, DVC

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Specs:

Electrical Data

Nominal impedance	Zn	4	ohm
Minimum impedance	Zmin	3	ohm
Maximum impedance	Zo	72	ohm
DC resistance	Re	2.5	ohm
Voice coil inductance	Le	1.8	mH
Capacitor in series with x ohm	Cc	--	uF

T-S Parameters

Resonance Frequency	fs	21.8	Hz
Mechanical Q factor	Qms	10.24	
Electrical Q factor	Qes	0.37	
Total Q factor	Qts	0.36	
Ratio fs/Qts	F	60	
Force factor	Bl	10.2	Tm
Mechanical resistance	Rms	1.48	Kg/s
Moving mass	Mms	110.9	g
Suspension compliance	Cms	0.48	mm/N
Effective cone diameter	D	24.4	cm
Effective piston area	Sd	466	cm ²
Equivalent volume	Vas	144.2	ltrs
Sensitivity		92	dB
Ratio BL/√(Re)		6.4	

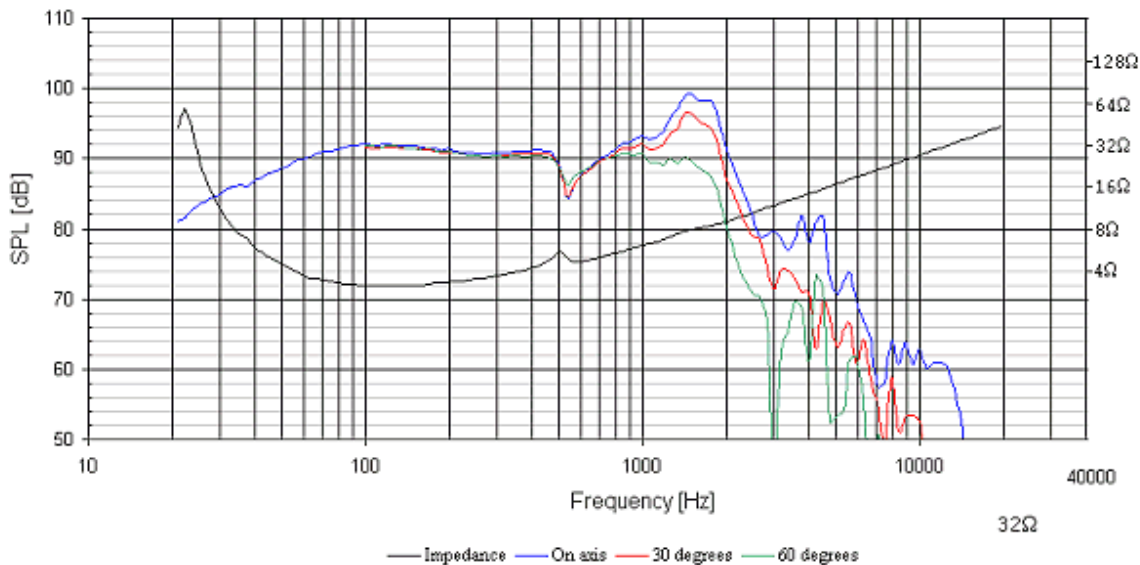
Power handling

100h RMS noise test (IEC)	175	W
Long-term Max System Power (IEC)	350	W
Max linear SPL (rms) @ power	--	dB/W
Short Term Max power	--	W

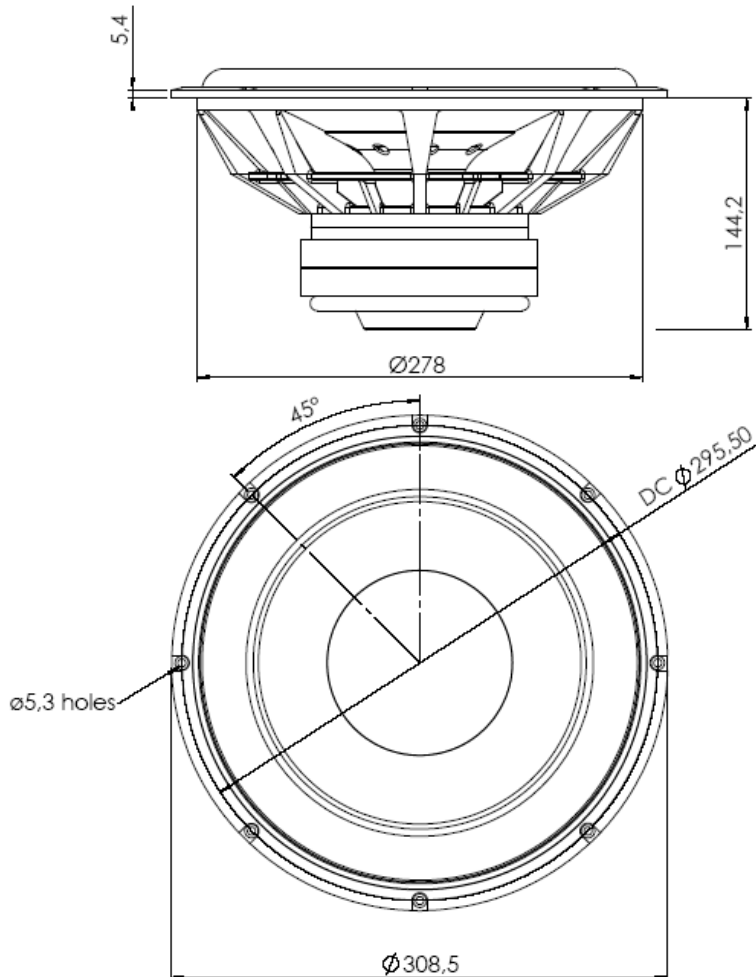
Voice Coil and Magnet Parameters

Voice coil diameter	51	mm
Voice coil height	33	mm
Voice coil layers	2	
Height of the gap	8	mm
Linear excursion +/-	12.5	mm
Max mech. excursion +/-	--	mm
Flux density of gap	--	mWb
Total useful flux	2.3	mWb
Diameter of magnet	147	mm
Height of magnet	35	mm
Weight of magnet	2.4	Kg

Frequency:



Mechanical Dimensions:





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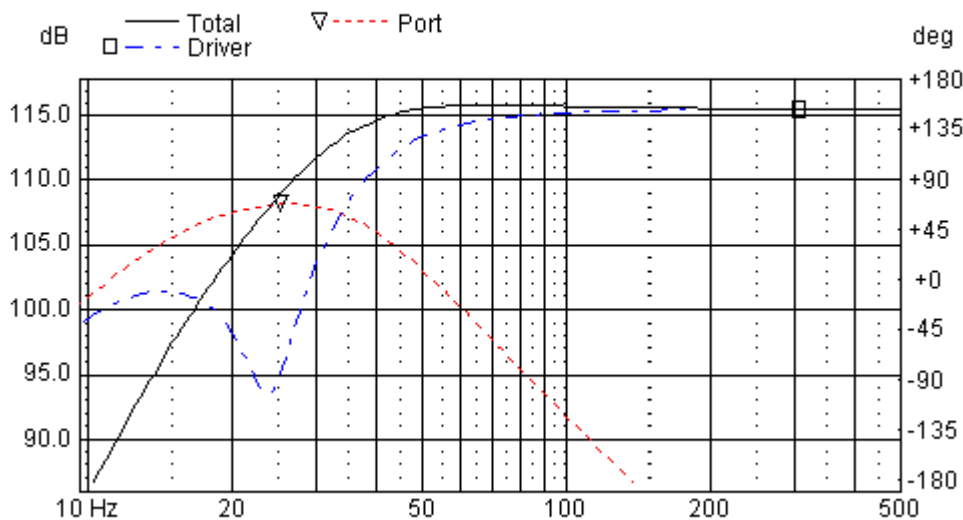
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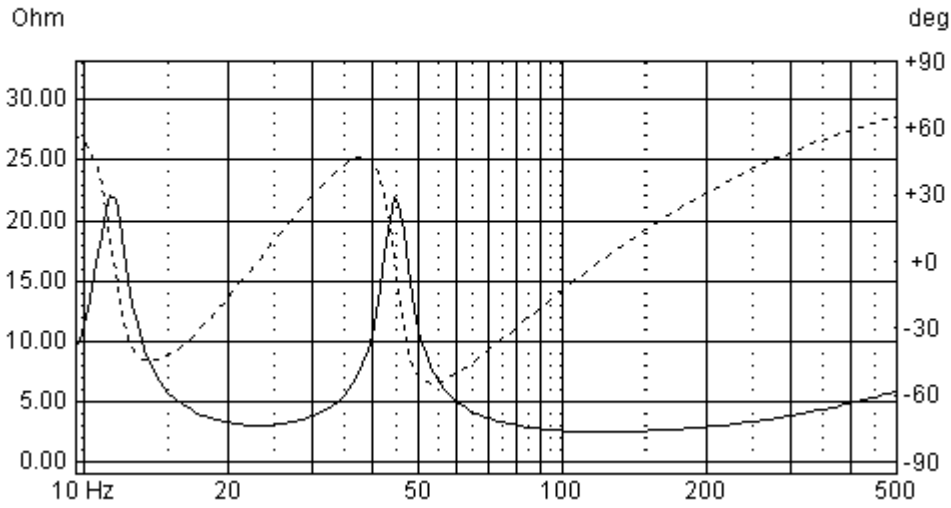
Tuning a Vented Box

BOX PROPERTIES		
Alignment	Bassreflex	
DRIVE UNIT	830847	
Box Volume	58	Ltr.
Port Length	45	Cm
Port Diameter	9	Cm
Fill	26	%
<i>f</i>_{-3dB}	32.5	Hz

Frequency response : Half Space (2л) 1m distance

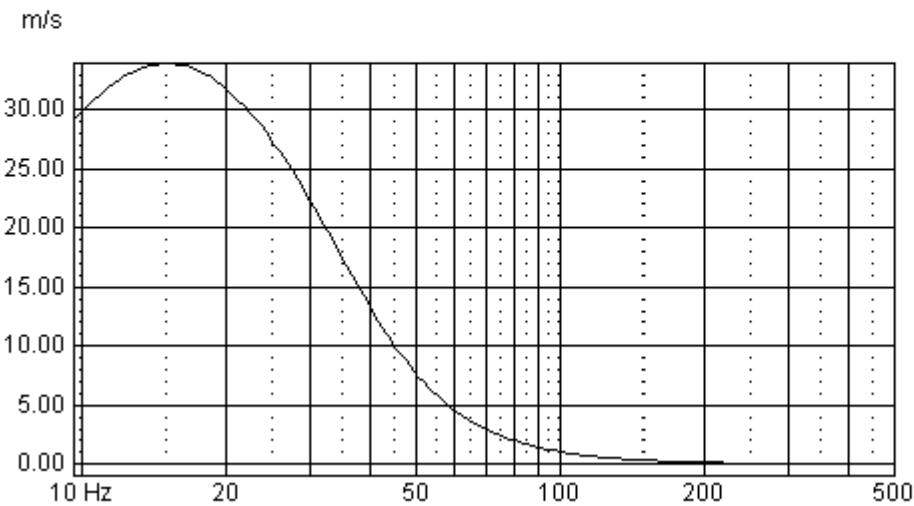


Impedance



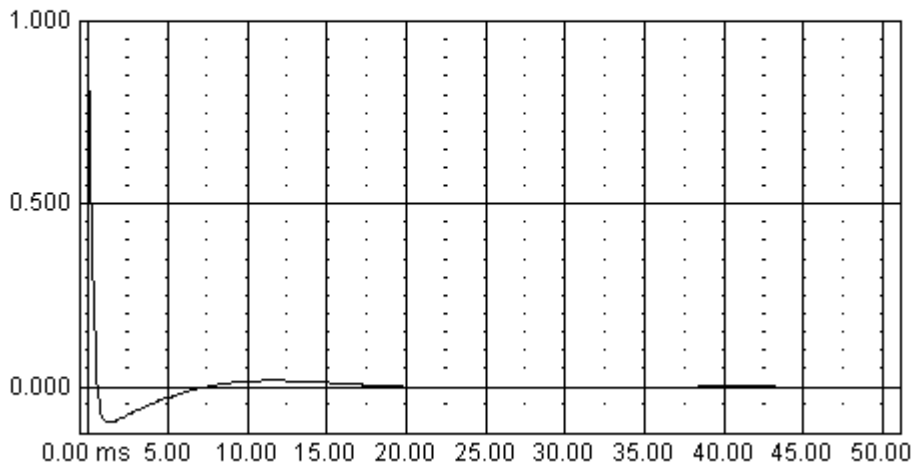
Air velocity in port

The dimensions of the duct take the air velocity into consideration and emphasis is put into keeping the Velocity (Duct noise) very low and below the limit of 35 m/s.



Source level: 39.0 V_{rms}

Transient Response: Impulse



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