

SLS 12" Subwoofer

Type Number: 830669

Features:

The SLS line combines high quality performance with an affordable design. These transducers are ideal for use in systems with high power handling requirements, and are logically combined with the SDS line.

Driver Highlights: Coated paper cone, 39 mm voice coil, AL shorting ring in magnet system.

[Go to Application Notes.](#)

[Go to Architecture Notes](#)



Specs:

Electrical Data

Nominal impedance	Zn	8	ohm
Minimum impedance	Zmin	6.5	ohm
Maximum impedance	Zo	80.4	ohm
DC resistance	Re	5.7	ohm
Voice coil inductance	Le	3.1	mH
Capacitor in series with x ohm	Cc	--	uF

T-S Parameters

Resonance Frequency	fs	28	Hz
Mechanical Q factor	Qms	6.7	
Electrical Q factor	Qes	0.51	
Total Q factor	Qts	0.47	
Force factor	Bl	12.2	Tm
Mechanical resistance	Rms	1.98	Kg/s
Moving mass	Mms	75.4	g
Suspension compliance	Cms	0.43	mm/N
Effective cone diameter	D	26.2	cm
Effective piston area	Sd	540	cm ²
Equivalent volume	Vas	172.4	ltrs
Sensitivity (2.83V/1m)		91.2	dB
Ratio BL/√(Re)		5.1	
Ratio fs/Qts	F	59	

Power handling

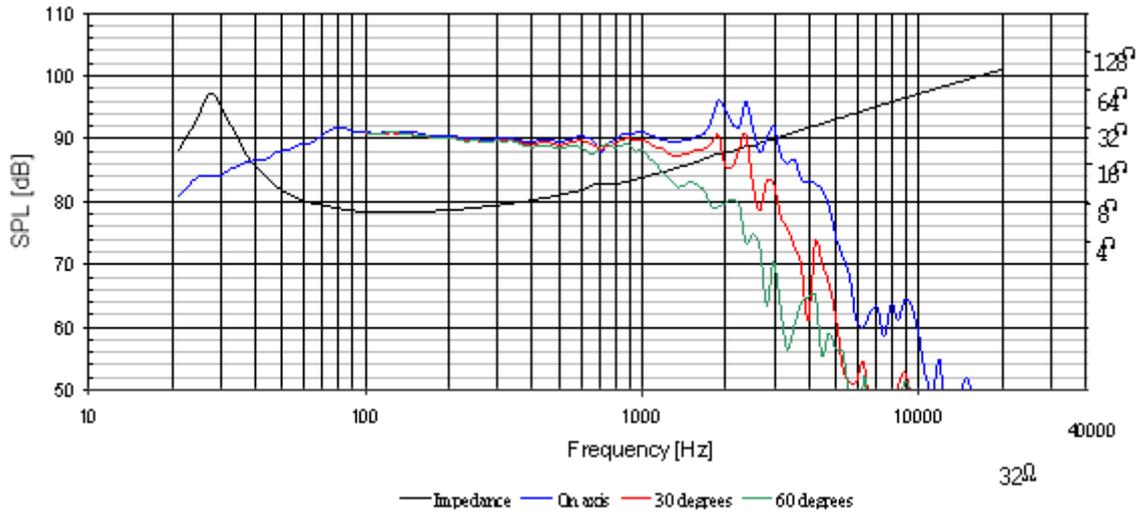
100h RMS noise test (IEC)	--	W
Long-term Max Power (IEC 18.3)	--	W
Max linear SPL (rms) @ power	--	dB/W
Short Term Max power (IEC 18.2)	--	W

Voice Coil and Magnet Parameters

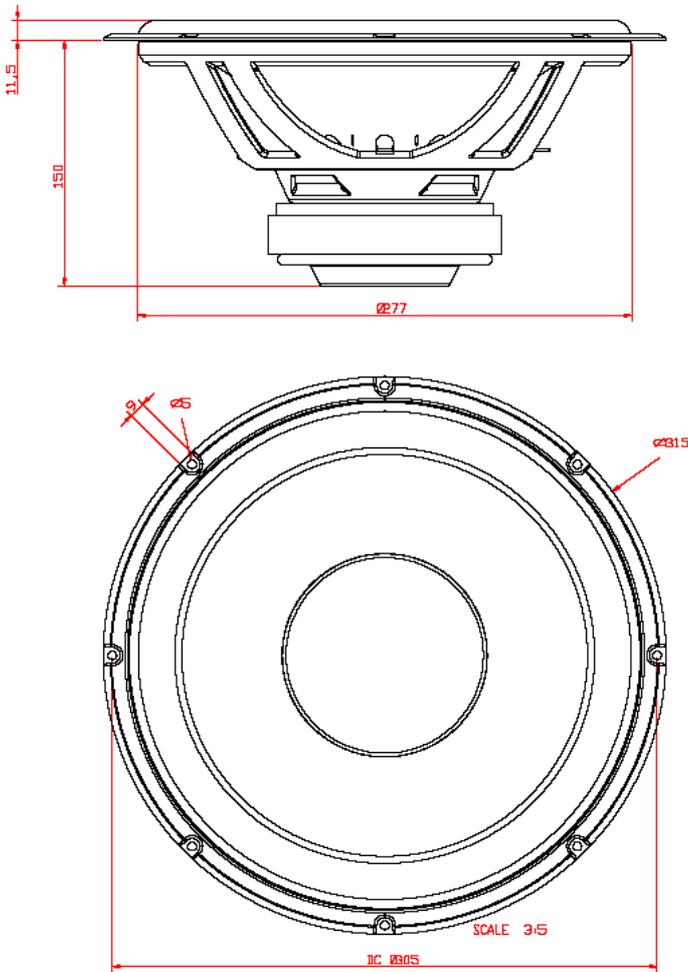
Voice coil diameter	39	mm
Voice coil height	24	mm
Voice coil layers	4	
Height of the gap	8	mm
Linear excursion +/-	8	mm
Max mech. excursion +/-	--	mm
Flux density of gap	--	mWb
Total useful flux	1.5	mWb
Diameter of magnet	134	mm
Height of magnet	22	mm
Weight of magnet	1.28	Kg

Notes:
IEC specs refer to IEC 60268-5 third edition
All Tymphany products are RoHS compliant

Frequency:



Mechanical Dimensions:





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Application notes:

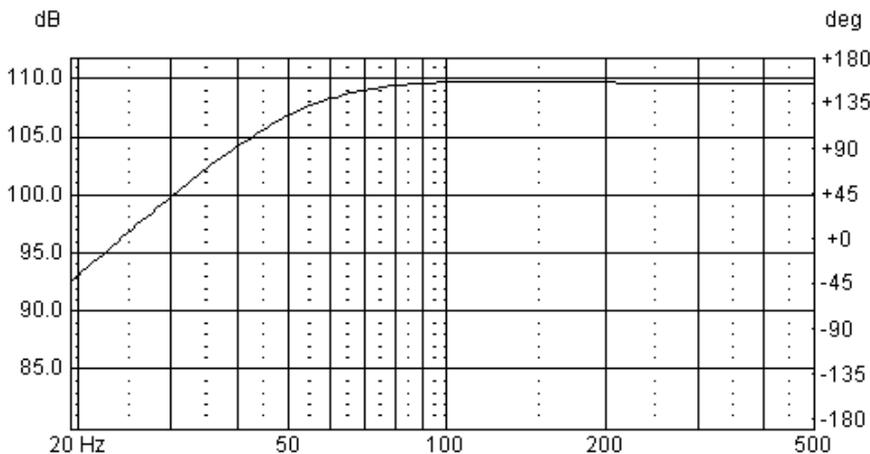
Driver Highlights: Coated paper cone, 39 mm voice coil, AL shorting ring in magnet system.

[Go to Data Sheet](#)

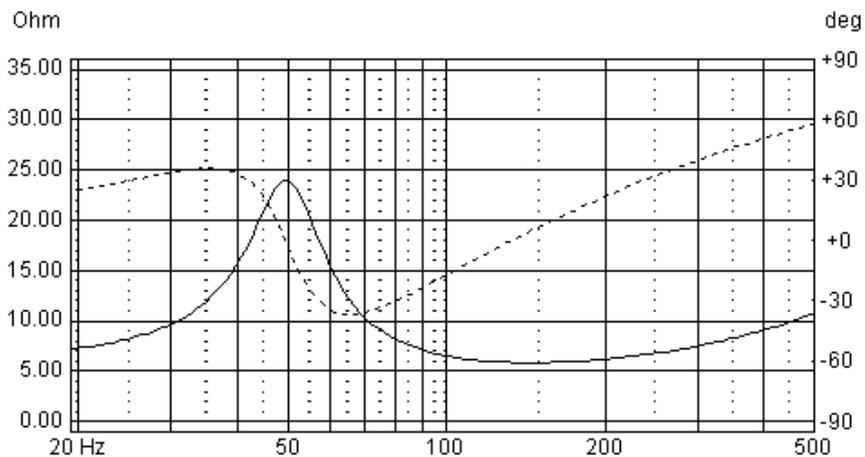
[Tuning a Sealed Box](#)

BOX PROPERTIES		
Alignment	Sealed box	
DRIVE UNIT	830669	
Box Volume	70	Ltr.
Fill	65	%
<i>f</i>_{-3dB}	49	Hz

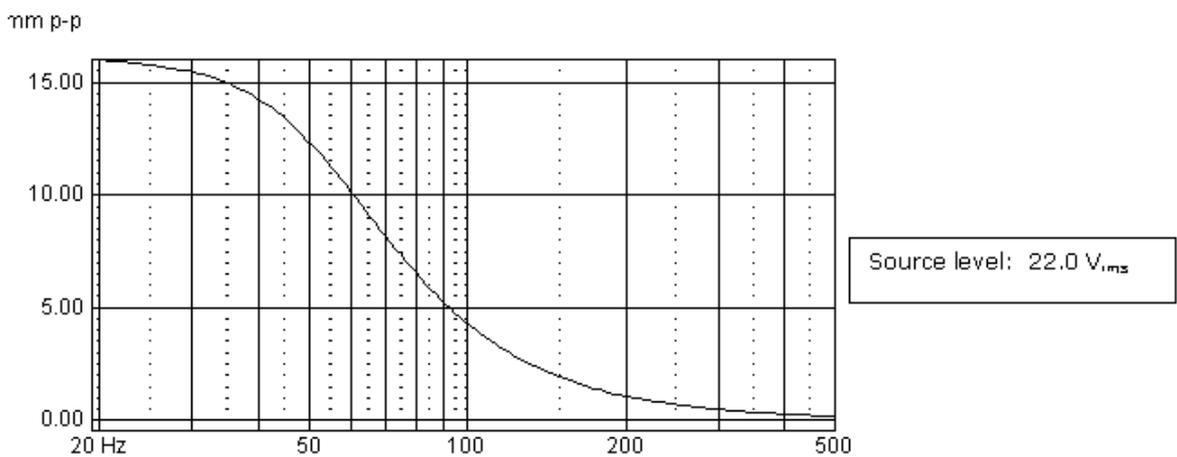
[Frequency response : Half Space \(2π\) 1m distance](#)



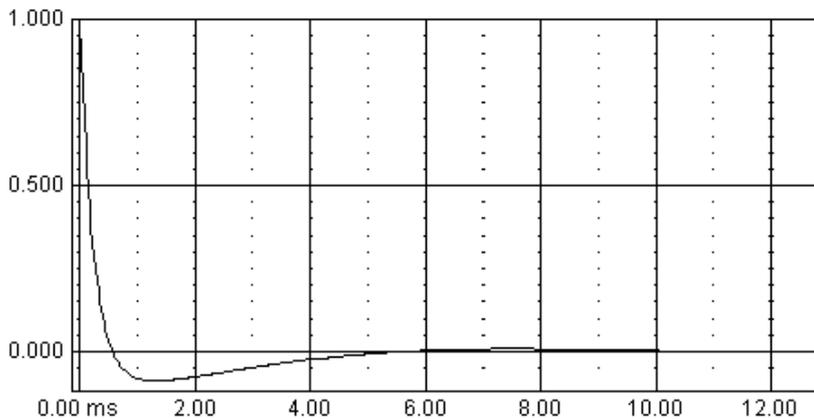
Impedance



Excursion



Transient Response: Impulse

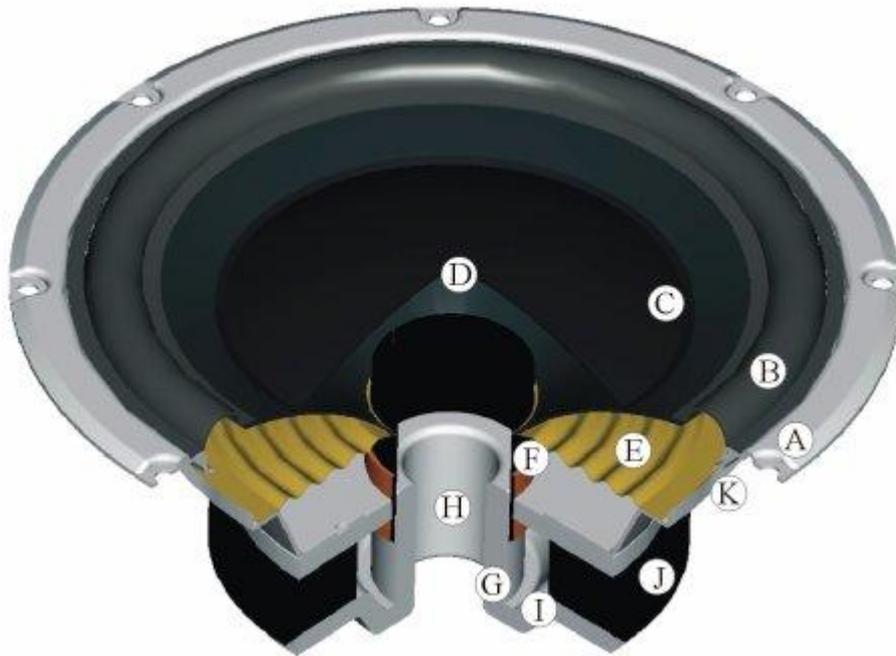


SLS PLATFORM

A new class of midbass and subbass drivers from Peerless.

With the new SLS platform design, Peerless have incorporated many of the features from the highly regarded XLS subwoofer platform. A variety of different cone technologies will be available for the SLS platform.

Furthermore a PA cone for high SPL is available. The SLS platform is available in sizes 8" and 12". A 10" is planned to be launched in summer 2001.



A. Low profile of basket

The low profile front of the basket is chamfered so that no countersinking is necessary. For rear mounting a rigid cardboard gasket can be fitted.

B. Rubber surround

For maximum durability and quality, the SLS subwoofer cones are fitted with rubber surrounds. For other applications cloth or foam surrounds are a possibility.

C. Various cones

For customization of sound Peerless is able to supply cones in different configurations. The cost effective pressed and coated paper cone with foam surround will give a crisp and forward sound, with a lean dry bass reproduction. The air-dried cone with rubber surround reproduces an even more rich bass sound.

D. Large dustcap

The large dustcap results in a "potent" look and leaves a very good printable platform for customization of the product.

E. Soft roll spider

The flat soft roll spider supports the cone movement and allows for more than $\pm 18\text{mm}$ (8") of cone travel. For maximum durability and a long lifetime, a carefully blended mix of cotton and Nomex[®] has been chosen.

F. Aluminum or kapton voice coil

The 39 mm aluminum voice coil former ensures a very good heat dissipation of the voice coil during high power loads and reduces power compression. The high temperature wire stays in position even when temperature reaches 250°C (482°F). For special applications where high mechanical Q is needed, a Kapton® or Kapton®MTB voice coil former is available.

G. Undercut polepiece

The polepiece is undercut to allow for more cone travel without noise. The undercut also improves linearity, resulting in low distortion.

H. Vented pole piece

The pole piece has a very large bore leaving just the necessary steel for the magnetic flux. The result of this is very low compression. The bore has flared ends for quiet cooling.

I. Extended backplate

The deeply extended backplate allows for more cone movement and Finite Element Magnetic optimization ensures that the magnet flux is used to maximum by controlling the shape of the steel.

J. Strontium ferrite magnet

The powerful Strontium ferrite magnet has been manufactured with high precision which results in narrow frequency response tolerances and low batch variation.

K. Low compression basket

The design of the basket is an attractive curved shape which has allowed our designers to open up the basket much more than normally seen on a steel frame without losing the strength. The low compression design also incorporates venting below the spider to further enhance the openness of the sound.