



## 12SW5 / 15SW5

The 12" and 15" Extreme subwoofer has two voice coils with 2 ohm each which can be configured for 4 ohm impedance (serial connection) or 1 ohm impedance (parallel connection). It has been developed reproduce the lowest frequencies in the audio spectrum - the sub-bass range - at high power in reduced volume boxes. It is the ideal subwoofer for sound competitions where best quality and power are required.

- Its advanced design cast frame is injected in aluminum with great mechanical and structural sturdiness.
- Its magnetic assembly has a bumped back plate and an extended center polar piece to allow long excursion and low distortion in the sub-bass frequency range.
- Its sturdy gold-plated connection terminals are easy to handle and assure perfect contact in connections.
- Its cone, with exclusive Selenium QCF® (Quartz Composite Fiber) technology, is humidity-resistance and very sturdy, enabling it to withstand the tremendous accelerations it will be subject to whenever under high power.
- Its gasket, in SBR composite rubber, withstands high temperatures and ultra-violet radiation, common in tropical climates.
- Its high compliance suspension ring made of polycloprene rubber is appropriate to absorb stationary waves.
- Its double spider is made of Polyamide Fiber, which was especially developed for this purpose and provides the moving assembly with great linearity in excursion and high absorption in low frequencies.
- Its long voice coil produced in Kapton® (12") or fiberglass (15"), and copper clad wire coated in polish withstands high temperatures.
- Its dust cap is produced in QCF® and features an embroidered with "Extreme" logo.



12SW5

15SW5

QCF® (Quartz Composite Fiber): Selenium trademark.

Kapton®: Du Pont trademark.

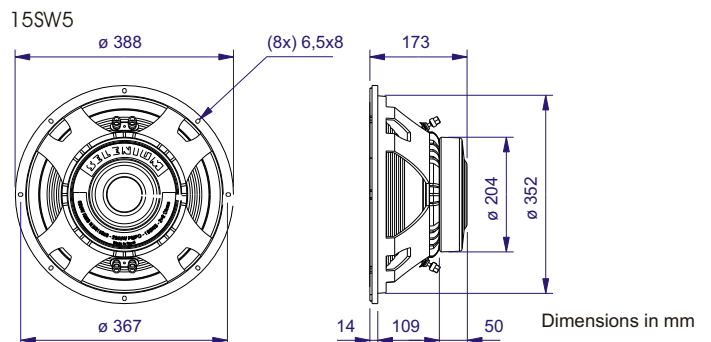
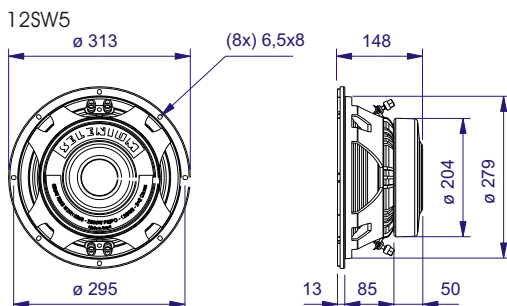
TECHNICAL SPECIFICATIONS	12SW5	15SW5
Nominal diameter . . . . . mm (in)	305 (12)	381 (15)
Nominal impedance . . . . . Ω	2 + 2	2 + 2
Power handling		
MAX <sup>1</sup> . . . . . W	1,300 (4Ω ou 1Ω)	1,300 (4Ω ou 1Ω)
RMS <sup>2</sup> . . . . . W	650 (4Ω ou 1Ω)	650 (4Ω ou 1Ω)
Sensitivity (1W@1m) . . . . . dB SPL	89	91
Frequency response @ -10 dB . . . . . Hz	30 to 3,000	35 to 3,000
Volume displaced by woofer . . . . . l (ft <sup>3</sup> )	3.2(0.11)	5.9(0.20)
Magnet weight . . . . . g (oz)	2,640(93.12)	2,640(93.12)
Voice coil diameter . . . . . mm (in)	100(3.9)	100(3.9)
Net weight . . . . . g (lb)	9,300(20.50)	9,600(21.16)

<sup>1</sup> Power handling specifications refer to normal speech and/or music program material, reproduced by an amplifier producing no more than 5% distortion. Power is calculated as true RMS voltage squared divided by the nominal impedance of the loudspeaker.

<sup>2</sup> Brazilian Standard NBR 10.303, with pink noise during 2 hours uninterrupted.

THIELE-SMALL PARAMETERS	12SW5	15SW5
Fs . . . . . Hz	31	23
Re . . . . . Ω	3.5	3.1
Qms . . . . .	5.20	7.10
Qes . . . . .	0.47	0.44
Qts . . . . .	0.43	0.42
Vas . . . . . l (ft <sup>3</sup> )	61(2.15)	238(8.40)
Ref Eff . . . . . %	0.46	0.77
Sd . . . . . m <sup>2</sup> (in <sup>2</sup> )	0.0520(80.60)	0.0845(130.98)
Vd . . . . . cm <sup>3</sup> (in <sup>3</sup> )	374.4(22.85)	608.4(37.13)
Xmax . . . . . mm (in)	7.2(0.28)	7.2(0.28)
βl . . . . . T.m	15.2	15.2

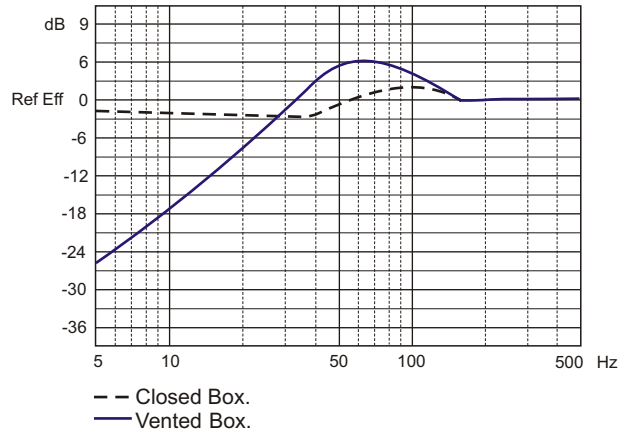
A variation of ± 15% is allowed.



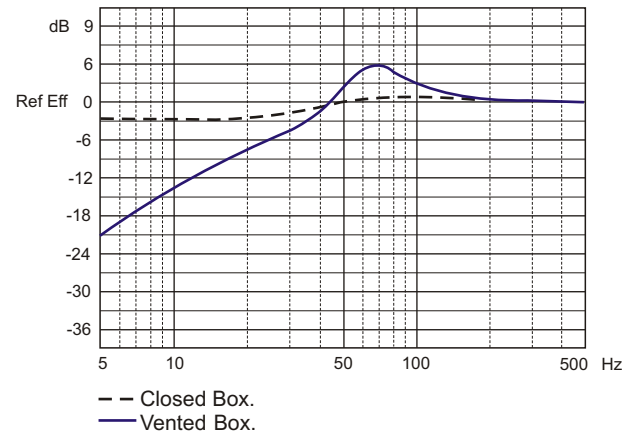


12SW5 / 15SW5

**12SW5  
SOFTWARE SIMULATED RESPONSE CURVE**



**15SW5  
SOFTWARE SIMULATED RESPONSE CURVE**



**SUGGESTED ENCLOSURES**

MODELS	CLOSED BOX		VENTED BOX	
	Internal Volume (liters)	Internal Volume (liters)	Duct (s)	
			Qty	Diam. x Length (cm)
12SW5	30	46	2	7,5 x 25
15SW5	46	58	2	7,5 x 16

The suggested enclosure volumes are related to only one speaker, including woofer and duct(s) displaced volume.

For enclosure with more than one speaker, it is necessary to multiply the suggested volume and duct(s) by the quantity of speakers and build them with separated chambers (internal division).

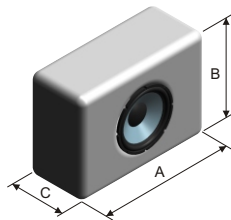
Box volumes considering the bass lift inside the car with closed apertures.

**ENCLOSURES INTERNAL VOLUME CALCULATION INSTRUCTIONS**

**RECTANGULAR BOX**

$$\text{Internal Volume} = \frac{A \times B \times C}{1000}$$

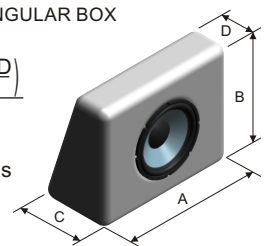
A, B and C are internal dimensions (in cm). The internal volume result is given in liters.



**TRAPEZOID RECTANGULAR BOX**

$$\text{Internal Volume} = \frac{A \times B \times \left(\frac{C+D}{2}\right)}{1000}$$

A, B, C and D are internal dimensions (in cm). The internal volume result is given in liters.



**Pay attention to the instructions below, before installing your Extreme:**

- Check terminals polarity and NEVER connect with the wrong polarity to avoid severe damage to the speaker and amplifier.
- Check impedance and power ratings of your amplifier. The Extreme outstands nominal power if wired to 1 ohms (the two bobins parallel connect to one channel amplifier output) or in 4 ohms mode (the bobins series connected to one channel amplifier). In the case of two separated power channel apply half the total power to each terminal pair.
- Be sure that both terminal pairs are equally and properly powered. NEVER apply power to a single terminal pair leaving the other floating. Use large diameter gauge wire.

Specifications subject to change without prior notice.

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**ELETRÔNICA SELENIUM S.A.**  
BR 386 Km 435 - Nova Santa Rita/RS - Brasil - CEP 92480-000  
Tel.: 51. 479 4000 Fax: 51. 479 1150  
www.selenium.com.br  
Atendimento Técnico: 0800 514161

**FILIAL SÃO PAULO**  
Rua Aquinos, 157 - São Paulo/SP - Brasil - CEP 05036-070  
PABX.: 11.2126 6300 Fax: 11.2126 6360

**SELENIUM USA / SELENIUM EUROPE**  
www.seleniumloudspeakers.com  
Toll Free: 1800 5620510