

# SUB energy WOOFER

## ES 380 900 Watt

### Technical Specifications

<b>Component:</b>	Subwoofer	
<b>Size</b>	mm	380 (15")
<b>Power Handling (Watt)</b>	peak	900
	continuous program	450
<b>Impedance</b>	Ohm	4
<b>Frequency response</b>	Hz	20 - 200
<b>Sensitivity</b>	dB/SPL	93,7
<b>Outer diameter</b>	mm	395
<b>Mounting hole diameter</b>	mm	350
<b>Magnet size</b>	mm	141
<b>Total depth</b>	mm	167
<b>Mounting depth</b>	mm	151
<b>Total driver displacement</b>	lit	2,3
<b>Weight of one component</b>	Kg	5,950
<b>Voice coil diameter</b>	mm	60
<b>Magnet</b>	Double magnet, High density flux ferrite	
<b>Cone</b>	Water repellent, pressed paper cone	
<b>Xmech*</b>	mm	14,5

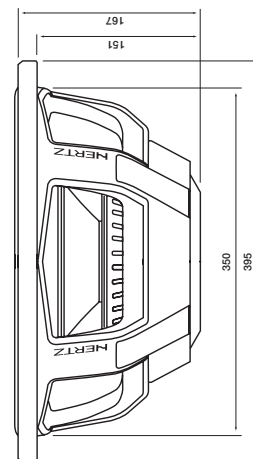
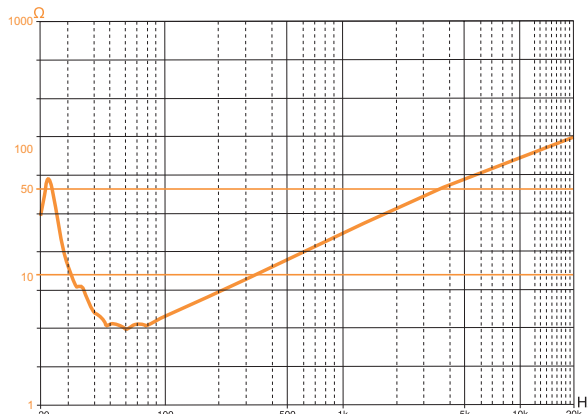
### Electro-Acoustic Parameters

<b>D</b>	mm	330
<b>Xmax</b>	mm	9
<b>Re</b>	Ohm	3,1
<b>Fs</b>	Hz	24
<b>Le</b>	mH@1kHz	3,56
<b>Le</b>	mH@10kHz	1,37
<b>Vas</b>	lit	220,00
<b>Mms</b>	gr	204,0
<b>Cms</b>	mm/N	0,22
<b>BL</b>	T-m	13,20
<b>Qts</b>		0,52
<b>Qes</b>		0,55
<b>Qms</b>		11,00
<b>Spl (1m/2,83V)</b>	dB	93,7

Xmech\* maximum mechanic excursion: it indicates the motion range in the speaker linear functioning area, in both ways.



- 1 High thermal dissipation and magnetic permeability plates, providing constant, even flux.
- 2 Large double magnet, for perfect control under high power, high excursion conditions.
- 3 Copper voice coil, wound on aluminium former, for startling thermal and mechanical capacity.
- 4 Back plate vent holes, for very good thermal dissipation.
- 5 Back Vented Spider support, for perfect symmetry under high excursion and thermal dissipation.
- 6 Butyl rubber gasket provides ideal coupling to the mounting surface damping basket resonance.
- 7 Butyl rubber magnet ring provides protection against abrasions.
- 8 Internally reinforced basket, protected from abrasions by high resistance paint.
- 9 High current, tin-plated terminals.
- 10 Silver plated silicone shielded lead wires for maximum reliability and conductivity.
- 11 Basket and motor coupled and damped through special epoxy glue.
- 12 Wide-wave, resin-bonded fibre spider for mechanical reliability and consistent parameters.
- 13 High density Foam surround, for linear movement even under high excursion conditions.
- 14 Water-repellent pressed paper cone.



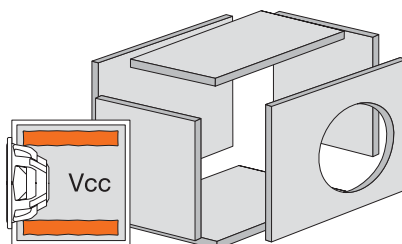
## design

### ES 380

The speaker overall volume must be taken into account when designing a box: if the driver is mounted with its magnet facing the box inner part, add the volume indicated in the Technical Specifications (Total driver displacement) to total volume calculation.  
 The volumes of Reflex projects include tubes and ports overall dimensions.

#### Sealed Box - Dimension

The box is deliberately small in order to optimize the overall bulk at most; this is the right solution for those who have a narrow space but nevertheless do not renounce a powerful bass.



#### Sealed Box

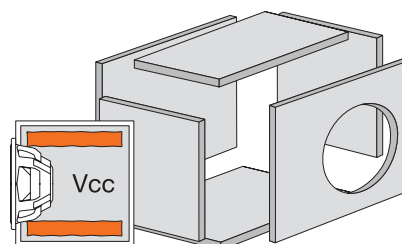
**Vcc** = 28 Lit  
**Fc** = 65 Hz

#### Damping material:

FONOFORM on all the inside walls except for the speaker's

#### Sealed Box - Performance

Bigger, both in dimensions and sound, it responds with a full bodily bass and excellent dynamics.

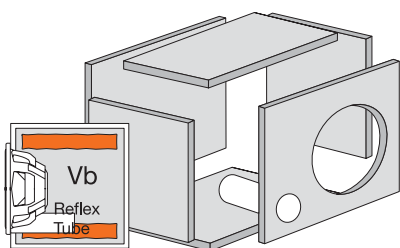


#### Sealed Box

**Vcc** = 43,3 Lit  
**Fc** = 54 Hz

#### Damping material:

FONOFORM on all the inside walls except for the speaker's



#### Reflex Box - Dimension

Almost the same dimensions as the Sealed Box Performance, yet offering a wider extension, with a strong sound and an excellent articulation.

#### Reflex Box

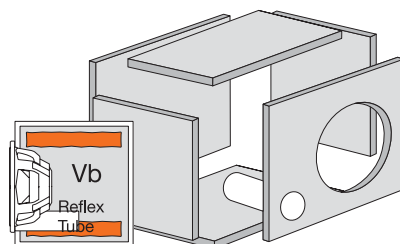
**Vb** = 43,3 Lit  
**Fb** = 32 Hz

#### Reflex Tube

**Ø** = AR100V  
**L** = 250 mm

#### Damping material:

FONOFORM on all the inside walls except for the speaker's



#### Reflex Box - Performance

Great power handling, high sensitivity values and great impact; this is the biggest sub for a powerful bass with every kind of music.

#### Reflex Box

**Vb** = 64 Lit  
**Fb** = 27 Hz

#### Reflex Tube

**Ø** = AR100V  
**L** = 250 mm

#### Damping material:

FONOFORM on all the inside walls except for the speaker's