

energy

ES 165

300 watt

Technical Specifications

Component	Subwoofer	
Size	mm	165 (6 1/2")
Power Handling (Watt)	peak	300
	continuous program	150
Impedance	Ohm	4
Frequency response	Hz	35-600
Sensitivity	dB/SPL	91
Outer diameter	mm	171
Mounting hole diameter	mm	144
Magnet size	mm	100
Total depth	mm	100
Mounting depth	mm	90
Total driver displacement	lit	0,5
Weight of one component	kg	2,290
Voice coil diameter	mm	35
Magnet	Double magnet, High density ferrite	
Cone	Water-repellent, pressed paper cone	
Xmech*	mm	14,5

Electro-Acoustic Parameters

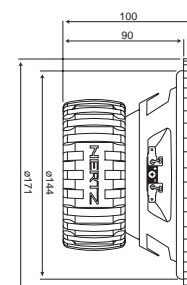
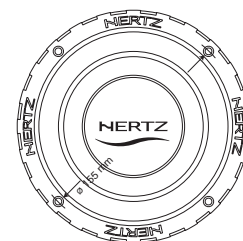
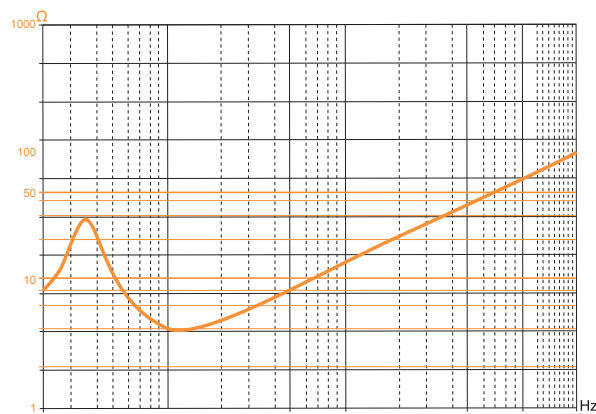
D	mm	128
Xmax	mm	9
Re	ohm	2,9
Fs	Hz	35
Le	mH@1kHz	2,05
Le	mH@10kHz	0,95
Vas	lit	11,40
Mms	gr	52,4
Cms	mm/N	0,40
BL	T-m	9,43
Qts		0,34
Qes		0,37
Qms		3,40
Spl (1m/2,83V)	dB	91

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



- High thermal dissipation and magnetic permeability plates.
- Big, high power double magnet.
- Pure copper voice coil, wound on Kapton former.
- Back vented hole.
- Butyl rubber gasket for mounting surfaces coupling.
- Butyl rubber protective ring.
- Internally reinforced basket, protected from abrasions by high resistance paint.
- High current, gold-plated terminals.
- Basket and motor are coupled and damped through special epoxy glue.
- Wide-wave, resin-bonded fibre spider.
- High density rubber surround, for mobile voice coil linear, long excursion.
- Water-repellent pressed paper cone.

Impedance

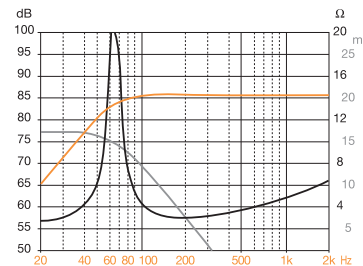
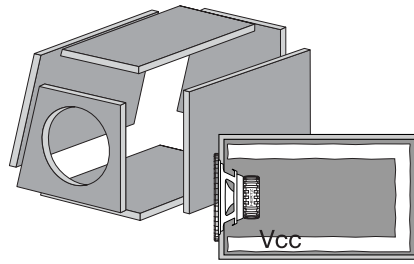


design ES 165

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, Asymmetric Bandpass and Double Reflex projects include tubes and ports overall dimensions.

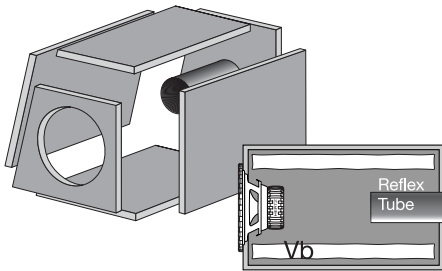
Sealed Box

It is the best compromise between size and performances; it insures powerful bass and good dynamics.



Sealed Box

Vcc = 5 Lit
Fc = 63 Hz
F-3 = 60 Hz



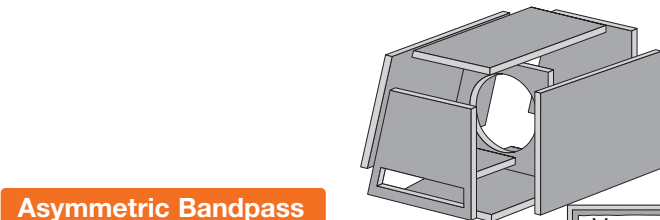
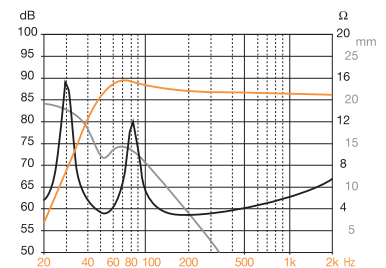
Reflex Box

Bigger than Sealed Box, it permits to have better power handling and fast, wide sound.

Reflex Box

Vb = 7,6 Lit
Fb = 52 Hz

Reflex Tube
Ø = 50 mm
L = 190 mm



Asymmetric Bandpass

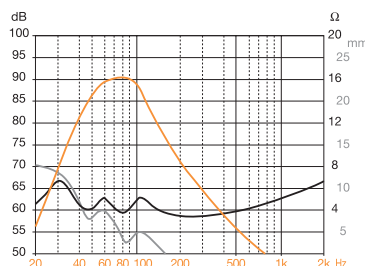
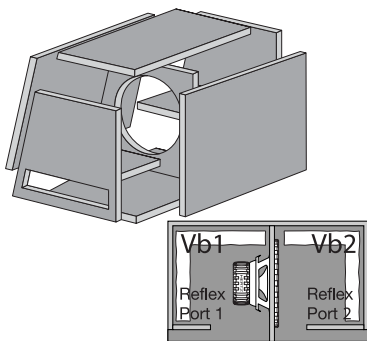
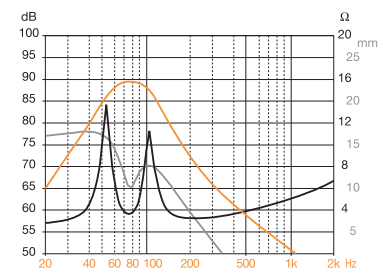
It combines the qualities of the two previous projects with high power handling and fast, clear bass. Suitable to any kinds of music.

Asymmetric Bandpass

Vcc = 3,5 Lit

Vb = 4 Lit
Fb = 75 Hz

Reflex Port
Sp = 32,5 cm²
L = 280 mm



Double Reflex

Vb1 = 4 Lit **Vb2** = 7 Lit
Fb1 = 85 Hz **Fb2** = 46 Hz

Reflex Port 1 **Reflex Port 2**
Sp = 36 cm² **Sp** = 21,5 cm²
L = 180 mm **L** = 350 mm

Double Reflex

It is more difficult to build and bigger. Perfect for techno and disco music.