

# FE166En

### Features

- ES cone and center cap are adapted. This new diaphragm material has the fine, supple and high density fiber, and its characteristics successfully improve the mid-high frequency reproduction.
- ø110mm strong ferrite magnet is employed.
- Well tuned Qts / Mms values for ease of use in the back loaded horn enclosure.

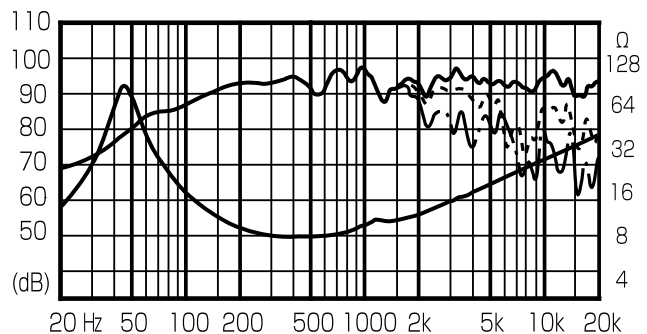


### Specifications

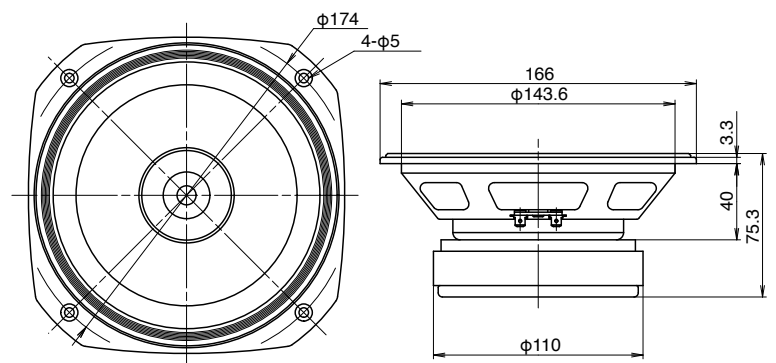
#### & Thiele/Small Parameters

Size	:	160 mm / 6.3 in
Voice Coil Diameter	:	25 mm / 1.0 in
Cast / Stamped	:	Stamped
Impedance	:	8 Ω
Reproduction Frequency Response	:	fs - 22 kHz
Sound Pressure Level	:	94 dB/W(m)
Rated Input	:	22 W
Music Power	:	65 W
Magnet Material	:	Ferrite
Magnet Weight	:	
(main)	:	600 g / 1.323 lb
(cancel)	:	n/a g / n/a lb
Net Weight	:	1,600 g / 3.527 lb

### Frequency Response / Impedance



### Dimensions & Mounting Information



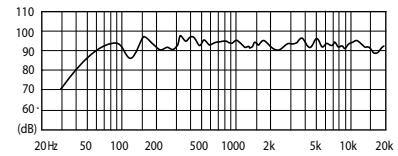
a :	65 mm
D :	130 mm
Sd :	0.0133 m <sup>2</sup>
Zn :	8 Ω
Fs :	53 Hz
Re :	7.2 Ω
Le :	0.052 mH
Qms :	3.426
Qes :	0.266
Qts :	0.25
Mms :	6.8 g
BL :	7.65 Telsa/m
Vas :	37.02 L
Xmax :	1.0 mm
Eff/η0 :	1.69 %
Cms :	1.474 m/N
EBP :	199.25

Overall Diameter	:	166 mm / 6.5 in
Baffle Hole Diameter	:	143.6 mm / 5.69 in
Depth	:	75.3 mm / 3.0 in

# Recommended Back Loaded Horn Type Enclosure

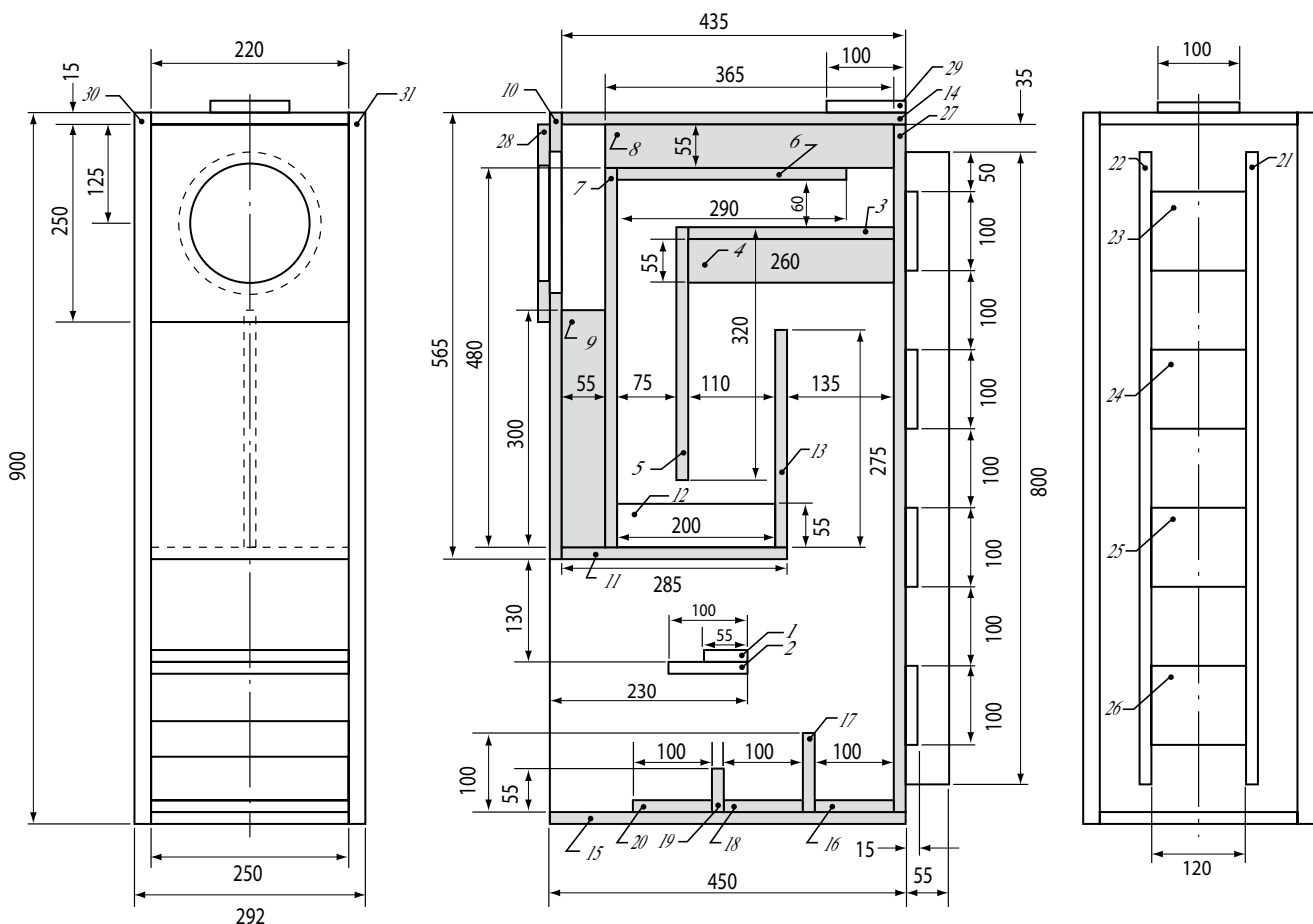
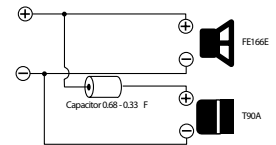


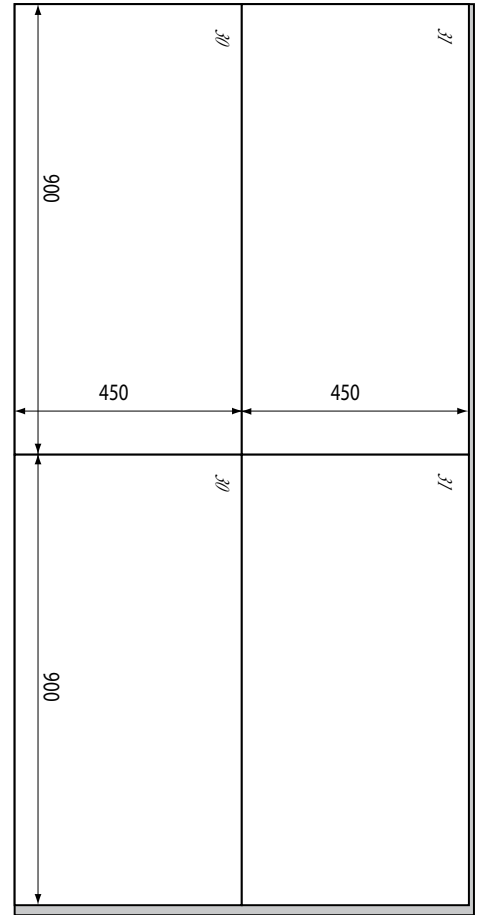
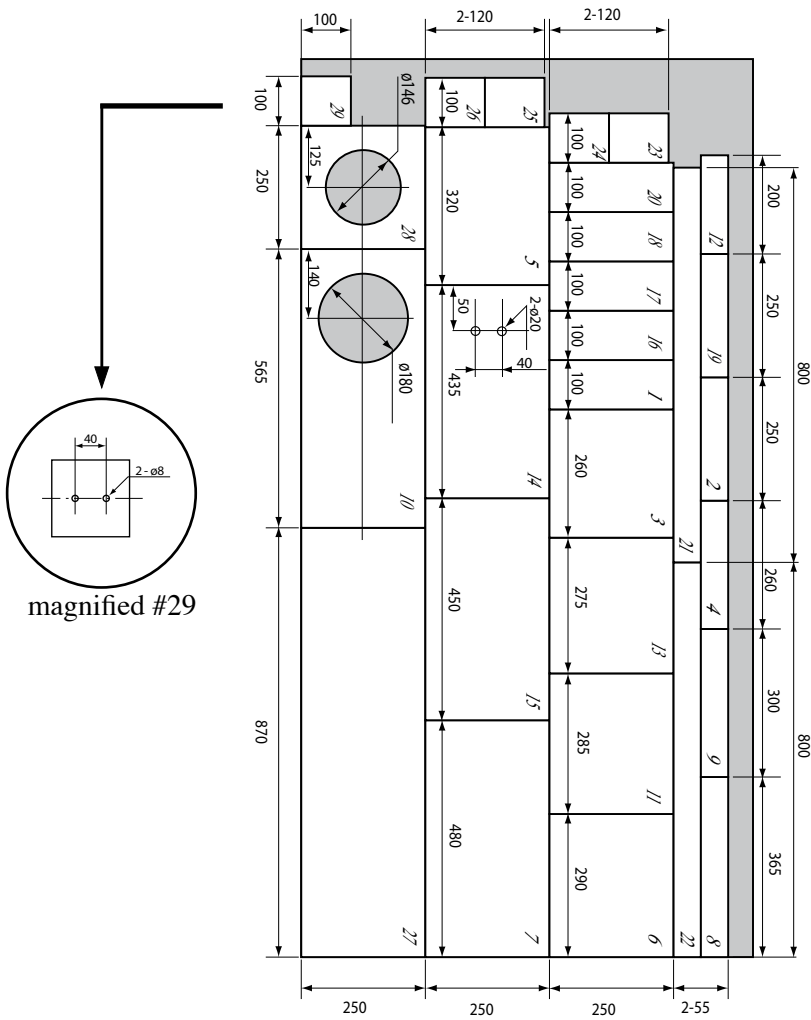
- This example shows a 'back loaded horn' type enclosure for FE166En.
- FE166En's magnetic circuit with  $\varnothing 110\text{mm}$  large ferrite magnet provides sharper resonance



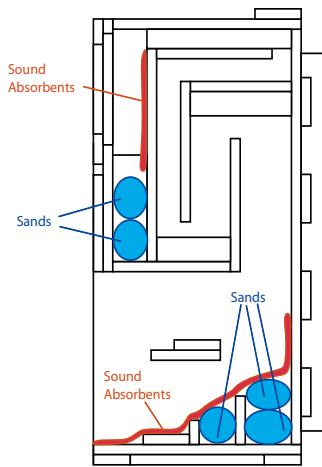
and makes the unit suitable for a back loaded horn.

- 15mm thick plywood panels are used for the main section and 21mm thick plywood for the side panels to ensure a strong enclosure.
- Two way system using super tweeter T90A is also recommended.



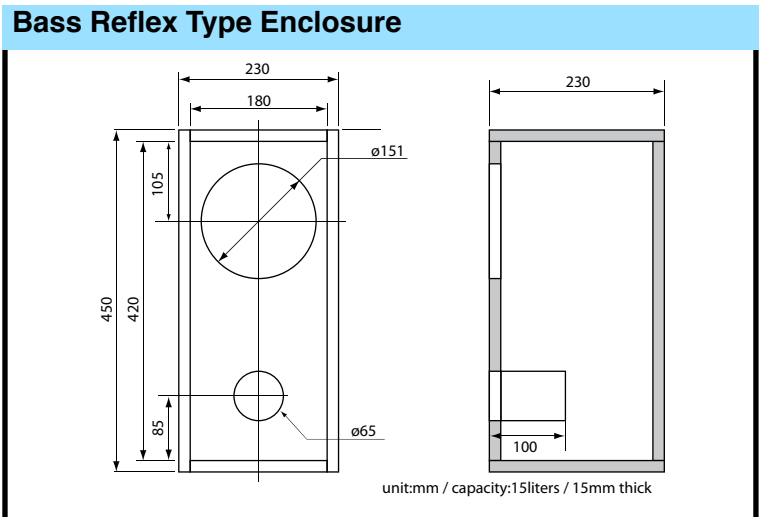


*\*Italic font means part number.*



- This example has sufficient internal volume. However, if you prefer ‘tighter’ sound reproduction, you can reduce airspace using sands or other fill material.
- Placing thin sound absorbent material as shown enables reduction of peaks & dips around 150 to 400Hz band width. However, it may reduce transient response. You should adjust it to your taste.
- In order to avoid unwanted mid/high frequency dispersion of the horn, we recommend damping the enclosure with filler and sound absorption material.

- FE166En is designed for a back loaded horn type enclosure. It is generally unsuitable for bass reflex type enclosure use because of its over damping sound characteristics. However it is possible to use the FE166En in a bass reflex type enclosure as shown.
- This example is a narrow and tall style bass reflex type enclosure. Internal volume is 15 liters tuned to approximately 65Hz (Fb).
- Low frequency response from around 150Hz is gently damped with a controlled peak at 60 to 80 Hz.



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