

# Fostex®

FULL RANGE SPEAKER UNIT

# FE166E

## Features

- 'ES cone' paper made of banana plant's fiber
- ø 110mm large ferrite magnet
- Newly designed center cap



## Specifications

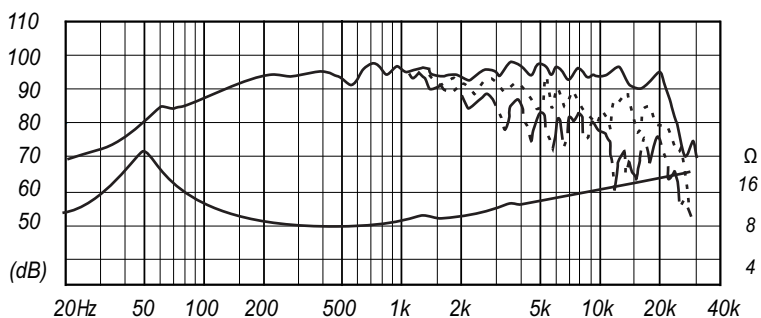
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### Thiele/Small Parameters

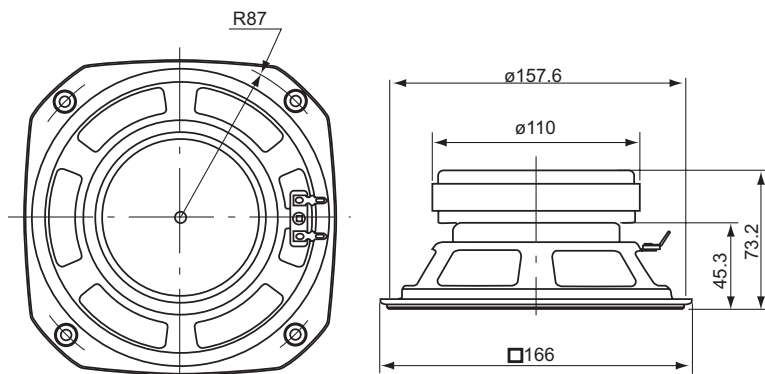
Size	:	160 mm / 6 in
Voice Coil Diameter	:	25 mm / 1 in
Cast / Stamped	:	Stamped
Impedance	:	8 Ω
Min. Frequency Response	:	50 Hz
Production Frequency Response	:	f0 - 22 kHz
Sound Pressure Level	:	94 dB/W(m)
Rated Input	:	22 W
Music Power	:	65 W
Magnet Material	:	Ferrite
Magnet Weight	:	
(main)	:	600.0 g / 1.323 lb
(cancel)	:	n/a g / n/a lb
Net Weight	:	1,600 g / 3,527 lb

a	:	65 mm
D	:	130 mm
Sd	:	0.01327 m <sup>2</sup>
Zn	:	8 Ω
Fs	:	50 Hz
Re	:	7.10 Ω
Le	:	n/amH
Qms	:	3.89
Qes	:	0.22
Qts	:	0.21
Mms	:	6.85 g
BL	:	8.33 Telsa/m
Vas	:	45.11 L
Xmax	:	0.6 mm
Eff/η0	:	1.83 W%
Cms	:	0.0018 mm/N

## Frequency Response / Impedance



## Dimensions & Mounting Information



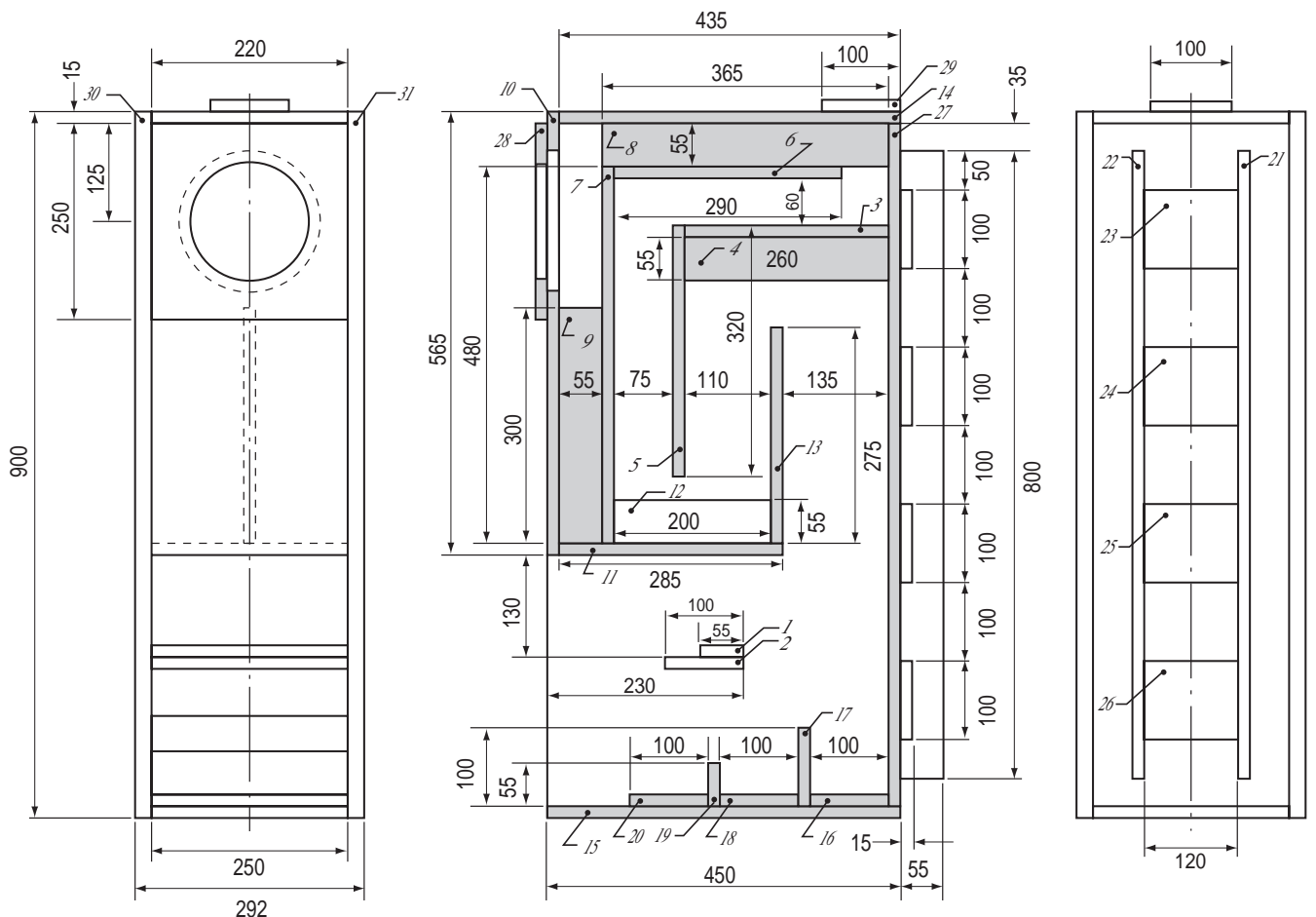
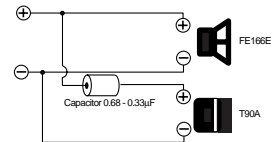
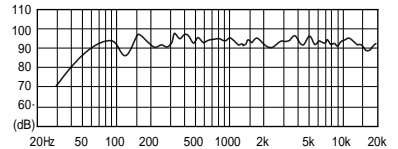
Overall Diameter	:	166 mm / 7 in
Baffle Hole Diameter	:	146 mm / 6 in
Depth	:	73.2 mm / 3 in

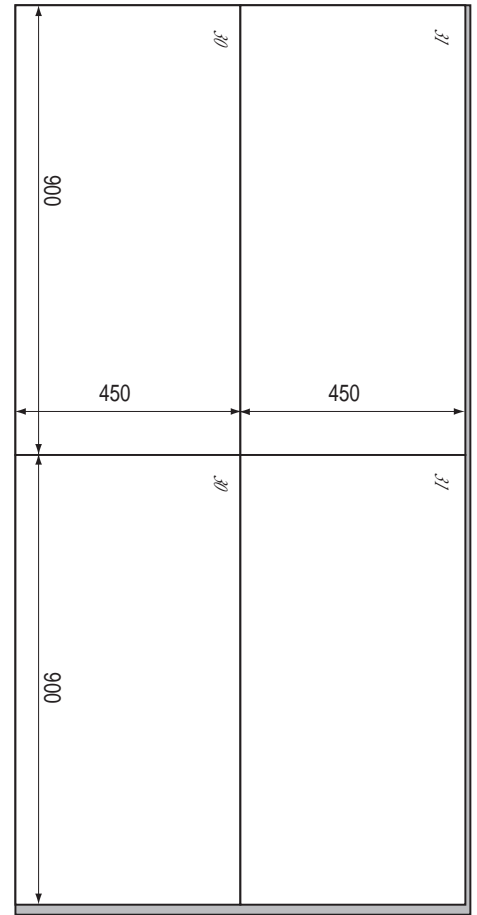
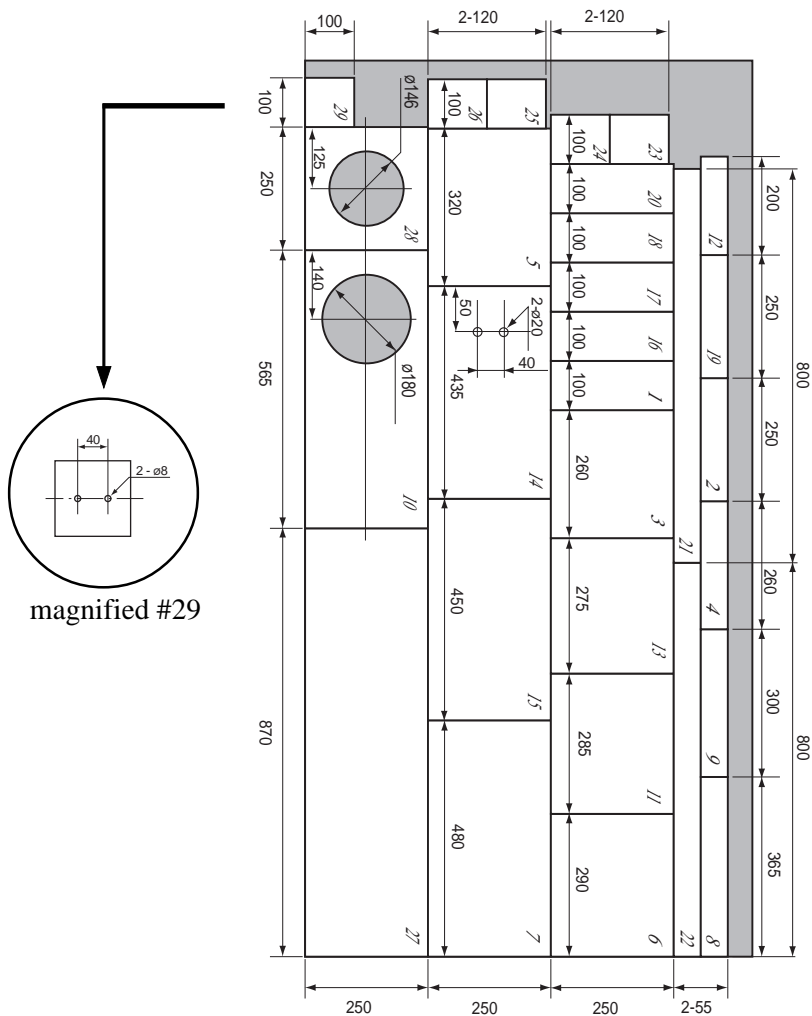
# FE166E

## Recommended Back Loaded Horn Type Enclosure

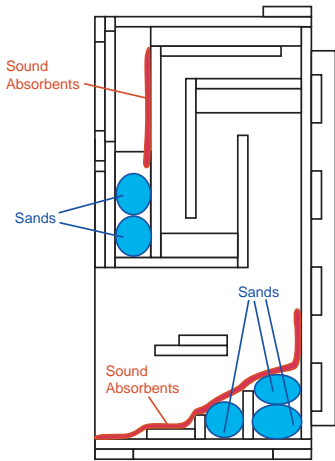


- This example shows a 'back loaded horn' type enclosure for FE166E.
- FE166E's magnetic circuit with  $\varnothing 110\text{mm}$  large ferrite magnet provides sharper resonance and makes the unit suitable for a back loaded horn.
- 15mm thick plywood panels are used for the main section and 21mm thick 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 may wish to use sand bags or fill to reduce airspace further.
- Placing thin sound-absorbent material as shown reduces peaks & dips from around 150 to 400Hz. However, damping may reduce transient response somewhat. You should adjust to taste.
- In order to avoid unwanted mid/high frequency dispersion from the horn, we recommend damping the enclosure with fill and sound absorption material.

- FE166E 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 FE166E in a bass 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 - 80Hz.

