

# 12 PT 200 FR

**SWETON®**



## 12 PT 200 FR – Wideband 12-Inch Full Range Driver

12 PT 200 FR is engineered to deliver a compelling balance of bass, mids, and upper midrange clarity in a single full-range driver. With a wide usable frequency response from 45 Hz to 10.5 kHz, it eliminates the need for multi-way systems in many compact applications.

This driver incorporates a robust ferrite motor with a high BI factor and a large cone area, delivering strong low-frequency response and impressive midrange output. A low inductance voice coil design ensures that high-frequency response remains extended and natural, ideal for speech, vocals, and acoustic instruments.

Ideal for portable PA systems, stage monitors, vocal monitors, and compact columns, the 12 PT 200 FR is a go-to solution when simplicity, power, and performance must coexist.

### Enclosure Recommendation

Enclosure Type	Volume (Litres)	Port Size (Dia x Length)	Tuning Frequency
Vented	45–55 litres	100 mm x 120 mm	55 Hz
Bass Reflex	litres	120 mm	
Sealed	30–35 litres	N/A	Fs ~ 75 Hz

### Crossover Recommendation

Driver	Type	Frequency	Slope
12 PT 200 FR	Low Pass	9.5–10.5 kHz	12 dB/oct
HF Compression Driver	High Pass	10 kHz	12 dB/oct

Note: If used as a full-range driver without HF, no crossover needed. But for sparkle and presence, add HF driver.

### Recommended HF Driver Pairing

Parameter	Recommendation
Power Rating	50–80W AES
Sensitivity	105–110 dB SPL
Diaphragm	Titanium or Kapton
Exit Size	1" compression driver (for compact HF boost)

### Applications

- Portable PA systems
- Stage monitors
- Speech and vocal monitors
- Column array systems
- Public address setups for small venues

### Why Use 12 PT 200 FR?

- True Full-Range Output – 45 Hz to 10.5 kHz coverage in one driver
- Compact System Design – Minimal need for crossovers or multiple drivers
- High BI & Low Le – Fast transient response and natural clarity
- Flexible Enclosure Use – Works well in both vented and sealed boxes
- Tested on Klippel System – Assured reliability and linearity

## SPECIFICATIONS & PARAMETERS

### Specifications

Nominal Diameter	321 mm
Nominal Impedance	8 $\Omega$
Nominal Power Handling (AES)	200 W
Program Power	400 W
Sensitivity (1W/1m)	94 dB
Frequency Range	45-10500 Hz
Magnet Material	Ferrite
Voice Coil Diameter	51.2 mm ( 2 in)
Winding Material	CCAW
Former Material	KAPTON
Winding Type	Outside

### Mounting Info

Overall Diameter	321 mm
Bolt Circle Diameter	300 mm
Baffle Cutout Diameter	287 mm
Depth	128 mm
Flange and Gasket Thickness	8 mm
Gross Weight	5.24 Kgs

### Parameters

Resonant Frequency	Fs	39 Hz
DC Resistance	Re	6.4 $\Omega$
Electrical Q	Qes	0.52
Mechanical Q	Qms	14.09
Total Q	Qts	0.5
Compliance Equivalent Volume	Vas	135.35 Ltrs
Peak Diaphragm Displacement Volume	Vd	0.17 Ltrs
Effective Surface Area of Cone	Sd	522.8 cm <sup>2</sup>
Reference Efficiency	$\eta_0$	1.49%
Moving Mass including air load	Mms	47.20 gms
Motor Strength	Bl	11.98 T-m
Voice Coil Inductance	Le	0.23 mH
Efficiency Bandwidth Product	EBP	75 Hz
Voice Coil Overhang	Xmax	$\pm 5.14$ mm

### Recone Kit

Recone Kit Number	REC12PT200FR
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$Z(f, x=0)$  Impedance

