12 PT 400 MID VA

SWETON®

12 PT 400 VA is a finely engineered 12-inch loudspeaker driver specifically optimized for vocal reinforcement in stage monitors and line array modules. Tuned for articulate midrange and smooth upper-mid response, it delivers crystal-clear vocals with controlled low-end performance.

Built on a high-efficiency motor structure with a Bl factor of 16.14 N/A and a Qts of 0.47, this driver ensures excellent transient response and low distortion. The low moving mass (Mms: 53.3g) and high sensitivity (96 dB SPL) make it suitable for high-output PA applications.

Tested on the Klippel Analyzer System, it ensures reliability under real-world conditions. Whether you're deploying it in a wedge monitor or a line array cabinet, the 12 PT 400 VA delivers precision and power you can count on.

Recommended Enclosure:

Type	Volume (Net)	Tuning Frequency	Port Specification
Vented Box	45–55 liters	65–70 Hz	Dual ports Ø85 mm × 130 mm each

For compact stage monitor applications, sealed box of 40L can also be considered.

Recommended HF Driver:

Parameter	Recommendation
Power Handling	50–80W AES
Diaphragm Type	Titanium or Polymer (for smoother vocals)
Sensitivity	105–108 dB SPL
Exit Size	1" or 1.4" compression driver

Crossover Points:

Section	Frequency Range	Type	Slope
Low-Pass for 12 PT 400 VA	3.0 kHz – 3.5 kHz	Passive/ Active	12–18 dB/oct
High-Pass for HF Driver	1.6 kHz – 1.8 kHz	Active/ Passive	12–18 dB/oct

Note: There is a gap between HPF of HF and LPF of the 12" to avoid overlap and phase issues. Fine-tune based on cabinet design and voicing.

Application Areas:

- Vocal floor monitors / wedge monitors
- Compact line array elements
- Touring PA systems
- Install sound reinforcement
- Speech reinforcement in auditoriums or religious venues

Why Choose 12 PT 400 MID VA?

- ☑ Tuned for superior vocal clarity
- ☑ Excellent thermal handling and mechanical stability
- ☑ High motor strength ($Bl^2/Re \approx 46.29$) ensures punch and articulation
- ☑ Low distortion, tested and validated using Klippel Analyzer
- ☑ Designed and Made in India — tuned for Indian touring and vocal-centric events

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SPECIFICATIONS & PARAMETERS

Specifications

Nominal Diameter	320 mm
Nominal Impedance	8 Ω
Nominal Power Handling (AES)	400 W
Program Power	800 W
Sensitivity (1W/1m)	96 dB
Frequency Range	60-5000 Hz
Magnet Material	Ferrite
Voice Coil Diameter	76.2 mm (3 in)
Winding Material	CCAW
Former Material	GLASS FIBRE
Winding Type	In/Out

Mounting Info

Overall Diameter	320 mm
Bolt Circle Diameter	300 mm
Baffle Cutout Diameter	286 mm
Depth	135 mm
Flange and Gasket Thickness	15 mm
Gross Weight	7.8 Kgs

Parameters

Resonant Frequency	Fs	67 Hz
DC Resistance	Re	5.6 Ω
Electrical Q	Qes	0.49
Mechanical Q	Qms	12.36
Total Q	Qts	0.47
Compliance Equivalent Volume	Vas	42.73 Ltrs
Peak Diaphragm Displacement Volume	Vd	0.13 Ltrs
Effective Surface Area of Cone	Sd	539.13 cm^2
Reference Efficiency	ηo	2.58%
Moving Mass including air load	Mms	53.3 gms
Motor Strength	Bl	16.14 T-m
Voice Coil Inductance	Le	0.40 mH
Efficiency Bandwith Product	EBP	137 Hz
Voice Coil Overhang	Xmax	±3.00 mm

Recone Kit

Recone Kit Number	REC12PT400MIDVA

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