18 PT 2500 SUB/4

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18 PT 2500 SUB/4 – "4-LAYER POWERHOUSE"

Built for systems that need more force and more power, the 18 PT 2500 SUB/4 is the step up from the 18 PT 2000 SUB. Its 6-inch, four-layer copper voice coil delivers a motor strength (Bl) of 63.58 T·m and handles 2500 watts AES. With ±12.5 mm of voice coil overhang it moves serious air on DJ gigs, processions and large PA setups.

The four-layer coil gives this driver an exceptionally strong motor: total Q (Qts) is just 0.29, so the cone stays tightly controlled and the bass stays punchy at high drive levels. Free-air resonance (Fs) is 49 Hz in small-signal measurement and moves down to about 35 Hz at working excursion (Klippel LSI), so the driver covers the 35–120 Hz subwoofer band in the enclosures recommended below. It is intended for use with an active crossover or DSP.

Enclosure Recommendations:

Type	Volume (Net)	Port Specs / Tuning
Vented Box	140 L	Tuned to 40 Hz. Port area 500 cm², length approx. 45 cm
4th Order Bandpass	Front: 60 L Rear: 70 L	Rear sealed. Front chamber tuned to 65 Hz (port 500 cm² × approx. 37 cm)
6th Order Bandpass	Front: 50 L Rear: 110 L	Rear tuned to 40 Hz (port 450 cm² × approx. 55 cm). Front tuned to 70 Hz (port 500 cm² × approx. 39 cm)

Calculated performance (2.83 V / 1 m, half-space): Vented: 40–170 Hz within ±3 dB, –6 dB at 34 Hz. 4th order bandpass: 50–85 Hz (–6 dB), peak 97 dB. 6th order bandpass: 38–86 Hz (–6 dB), peak 97 dB.

Note: Volumes are net of driver, ports and bracing. Port lengths are starting values; confirm the tuning frequency by impedance measurement. Bandpass designs give more output in a narrower band, ideal for DJ and mobile setups needing heavy thump.

HF Driver Recommendation (if used with a crossover)

HF Driver Type	Spec
Compression Driver	1.4" titanium diaphragm, 100W AES
SPL Sensitivity	110–112 dB

Crossover Recommendations:

Filter Type	Frequency Point	Slope
LPF (for 18 PT 2500 SUB/4)	80 – 120 Hz	24 dB/oct (Butterworth or LR4)
HPF (for Subwoofer)	35 Hz	24 dB/oct (Butterworth) to protect from over-excursion
HPF (for HF driver)	1.5 – 1.8 kHz	24 dB/oct if paired with mid driver

Applications:

- DJ Systems and Mobile DJ Vans
- Festival and Procession Rigs
- Roadshows and Outdoor PA
- Touring Concert Subwoofers
- High-SPL Bass Reflex and Bandpass Designs

Why Choose 18 PT 2500 SUB/4?

- Massive 6-inch, 4-layer copper coil: built to take 2500 W AES.
- Very high Bl (63.58 T·m) and low Qts (0.29) for tight magnetic control of the cone.
- Deep excursion (±12.5 mm voice coil overhang) for real chest-thumping bass.
- Klippel-measured motor: force factor stays above 89% of its rest value across ±8 mm of travel.
- Suited to vented and bandpass enclosures for boosted output.
- Built for Indian gig conditions – robust, efficient and durable.

Legal Disclaimer (Technical Recommendations):

Disclaimer: All enclosure volumes, port dimensions, crossover frequencies, and HF driver recommendations mentioned in this document are based on standard Thiele/Small parameter analysis and typical application scenarios. These are suggested guidelines intended to assist system designers and integrators. Actual results may vary depending on cabinet construction, environment, signal chain, and usage conditions.

SWETON shall not be held liable for any direct or indirect losses, damages, or performance issues arising from reliance on these recommendations. Users are advised to conduct their own system-level testing before deployment.

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SPECIFICATIONS & PARAMETERS

Specifications

Nominal Diameter	464 mm
Nominal Impedance	8 Ω
Nominal Power Handling (AES)	2500 W
Program Power	5000 W
Sensitivity (1W/1m)	93.5 dB
Frequency Range	50-1800 Hz
Magnet Material	Ferrite
Voice Coil Diameter	152 mm (6.0 in)
Winding Material	COPPER
Former Material	GLASS FIBRE
Winding Type	4-Layer

Mounting Info

Overall Diameter	464 mm
Bolt Circle Diameter	445 mm
Baffle Cutout Diameter	420 mm
Depth	214 mm
Flange and Gasket Thickness	16 mm
Gross Weight	48 Kgs

Parameters

Resonant Frequency	Fs	49 Hz
DC Resistance	Re	6.19 Ω
Electrical Q	Qes	0.29
Mechanical Q	Qms	16.07
Total Q	Qts	0.29
Compliance Equivalent Volume	Vas	35.89 Ltrs
Peak Diaphragm Displacement Volume	Vd	1.53 Ltrs
Effective Surface Area of Cone	Sd	1225.42 cm^2
Reference Efficiency	ηo	1.42%
Moving Mass including air load	Mms	616 gms
Motor Strength	Bl	63.58 T-m
Voice Coil Inductance	Le	4.22 mH
Efficiency Bandwidth Product	EBP	169 Hz
Voice Coil Overhang	Xmax	±12.5 mm

Recone Kit

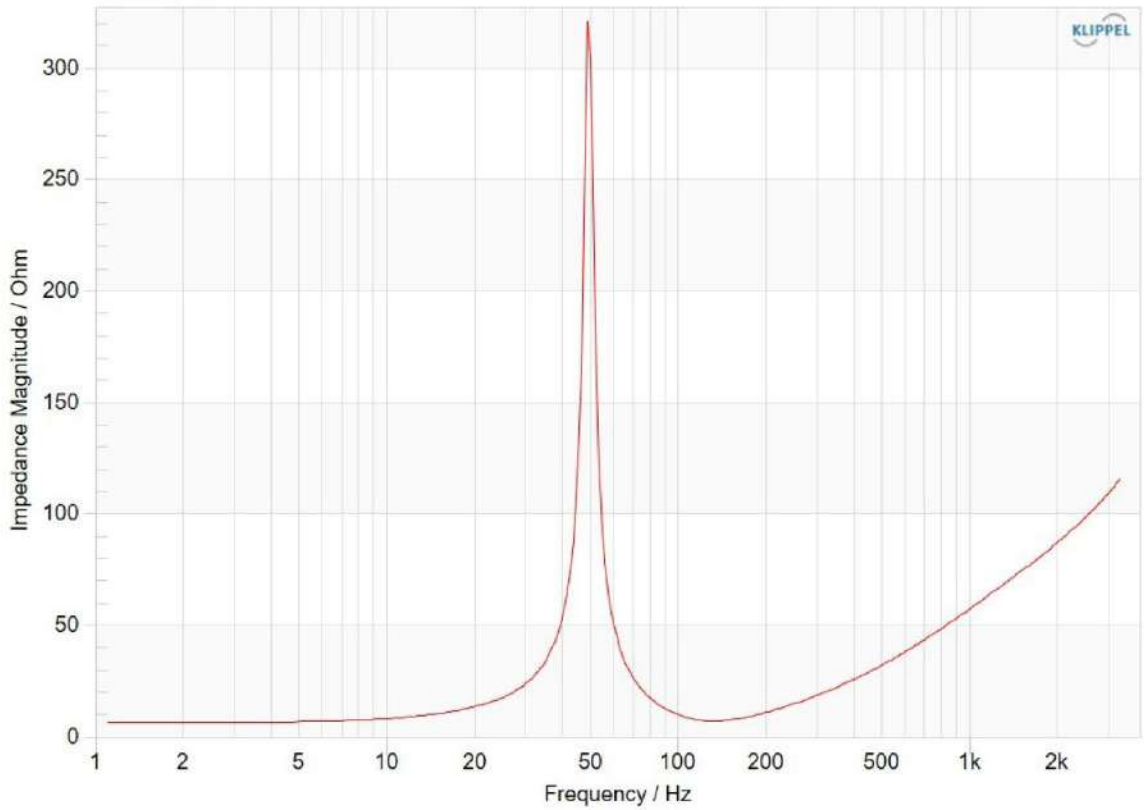
Recone Kit Number	REC18PT2500SUB4

Thiele/Small parameters: Klippel LPM (laser), small-signal, free air. Sensitivity: half-space reference value calculated from the reference efficiency ηo. Frequency range: –10 dB limits of the CLIO frequency response on page 3 (driver in the 900 L sealed test enclosure). Vd = Sd × Xmax (one-way peak; 3.06 Ltrs peak-to-peak). Xmax is the geometric voice coil overhang.

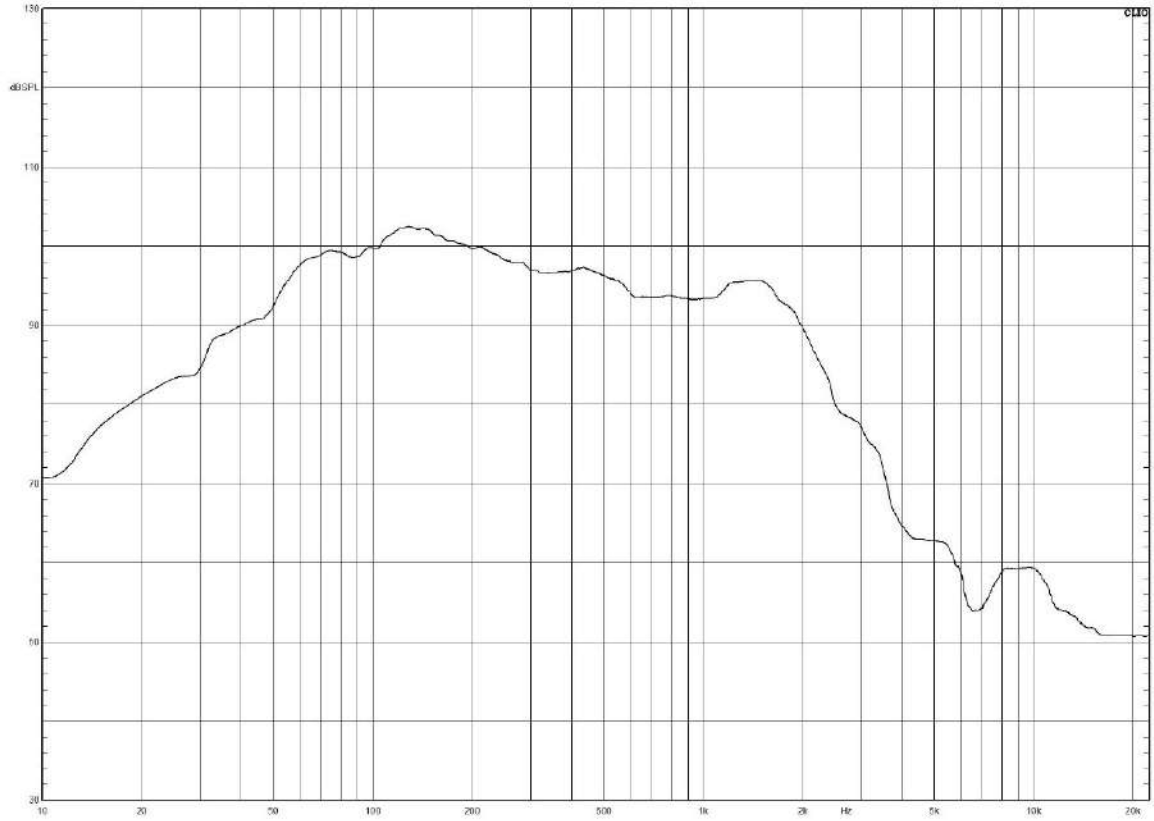
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Magnitude of Electrical Impedance Z(f)



Impedance: Klippel LPM measurement, free air, small signal



Frequency response: CLIO measurement