MATRIX



ML165 PRO

165 MM / 6.5 INCH HANDCRAFTED HIGH-END WOOFERS

MADE IN GERMANY



ML165 PRO

Ultra-lightweight carbon fleece multilayer cone

Combines superior stiffness-to-weight ratio with reduced resonance for precise, natural and highly dynamic sound reproduction

High-strength Nomex spider

Crafted from meta-aramid fabric to ensure exceptional shape stability and long-term reliability even under demanding conditions

Copper cap on the pole core

Minimizes voice coil inductance, linearizes impedance at high frequencies, and enhances efficiency for greater transparency and refined upper-frequency response

Vented pole core and spider

Enhances airflow within the magnetic system and reduces compression effects for consistent performance even at high sound pressure levels

Hemispherically shaped dust cap

Optimizes the upper midrange response for seamless tonal transitions and exceptional detail resolution

Specially shaped rubber surround

Crafted from premium butyl enables maximum linear cone excursion with minimal distortion

Massive 24-carat gold-plated terminals

Guarantee maximum conductivity and signal quality

Aerodynamically shaped aluminum die-cast basket

Allows ideal voice coil ventilation while minimizing airflow noise for consistently high performance even at demanding levels

Ultra-precise machined magnet system

Guarantees optimal symmetrical magnetic flux, outstanding impulse accuracy and powerful low-frequency performance

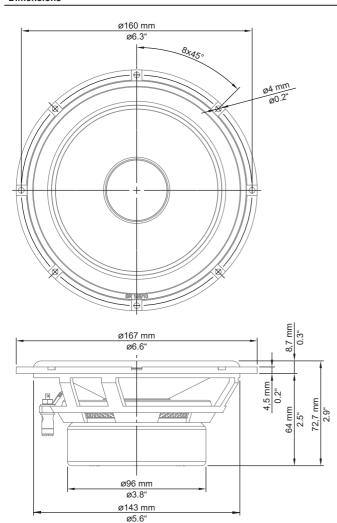
Made in Germany

- Developed and manufactured for uncompromising sound quality at reference level -

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Dimensions



Technical data

Power handling	RMS Max.	120 W 170 W
Impedance	Z	4 Ω
DC resistance	Re	3.4 Ω
Frequency response		40 - 4,000 Hz
Resonance frequency	Fs	48 Hz
Mechanical Q factor	Qms	6.80
Electrical Q factor	Qes	0.50
Total Q factor	Qts	0.47
Compliance	Cms	560 μm/N
Equivalent air volume	Vas	14.6 L
Force factor	B*I	6.3 Tm
Sensitivity (2,83V / 1m; 1W / 1m)	SPL	91 dB; 88 dB
Cone area	Sd	137 cm ²
Moving mass	Mms	19.1 g
Mechanical resistance	Rms	0.87 kg/s
Voice coil diameter	Ø	37 mm
Voice coil winding height		14 mm
Max. linear excursion	Xlin	+/- 4 mm
Max. mechanical excursion	Xmax	+/- 8 mm

Recommended installation options

a. Infinite baffle		
Recommended highpass filter	50 Hz / 24 dB/Octave "Linkwitz-Riley"	
b. Sealed box		
Net volume	13 L	
Lower limiting frequency (-3 dB)	71 Hz	
Recommended highpass filter	65 Hz / 24 dB/Octave "Linkwitz-Riley"	

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