

MATRIX

3R X



ML80 PRO

80 MM / 3.15 INCH

HANDCRAFTED HIGH-END MIDRANGE SPEAKERS

MADE IN GERMANY

MATRIX



ML80 PRO

Ultra-lightweight carbon fleece multilayer cone

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

Newly developed high-damping rubber surround

Crafted from premium butyl rubber for maximum cone control, reduced distortion and exceptionally sound reproduction

Integrated solid stainless-steel phase plug

Ensures perfectly controlled dispersion and precise midrange reproduction

24-carat gold-plated terminals

Guarantee maximum conductivity and signal quality

Ultra-precise machined push-pull neodymium magnet system

Ensures excellent magnetic linearity for minimal distortion, clean dynamics and maximum control at high output levels

Aerodynamically shaped aluminum die-cast basket

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

High-strength Nomex spider

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

Vented spider

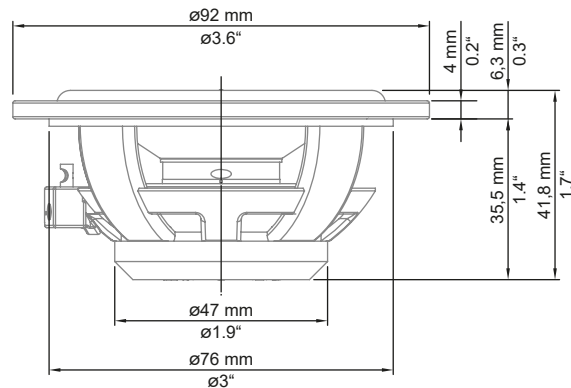
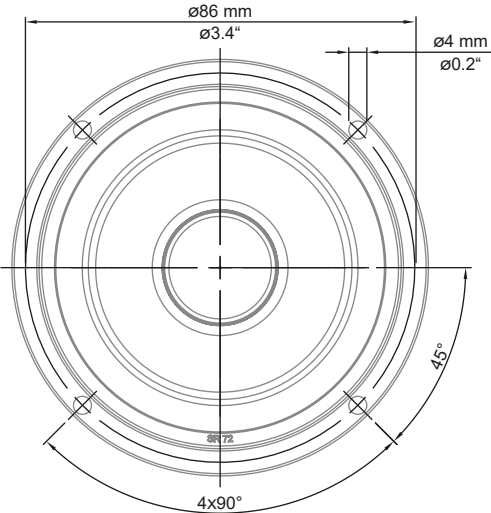
Enhances airflow between spider and magnet system for consistent performance even at high sound pressure levels



Made in Germany

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

Dimensions



Technical data

Power handling (highpass > 300 Hz at 24 dB/Oct.)	<i>RMS</i> <i>Max.</i>	100 W 150 W
Impedance	<i>Z</i>	4 Ω
DC resistance	<i>Re</i>	3.4 Ω
Frequency response		250 - 6,000 Hz
Resonance frequency	<i>Fs</i>	114 Hz
Mechanical Q factor	<i>Qms</i>	1.71
Electrical Q factor	<i>Qes</i>	0.46
Total Q factor	<i>Qts</i>	0.36
Compliance	<i>Cms</i>	640 μm/N
Equivalent air volume	<i>Vas</i>	1.15 L
Force factor	<i>B*I</i>	4 Tm
Sensitivity (2,83V / 1m; 1W / 1m)	<i>SPL</i>	91 dB; 88 dB
Cone area	<i>Sd</i>	35 cm²
Moving mass	<i>Mms</i>	3 g
Mechanical resistance	<i>Rms</i>	1.26 kg/s
Voice coil diameter	Ø	25 mm
Voice coil winding height		6 mm
Max. linear excursion	<i>Xlin</i>	+/- 1.5 mm
Max. mechanical excursion	<i>Xmax</i>	+/- 4 mm

Recommended installation options

a. Infinite baffle

Recommended highpass filter	300 Hz / 24 dB/Octave "Linkwitz-Riley"
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b. Sealed box

Net volumes	Recommended DSP / amplifier highpass filter
0.4 liter (System resonance: 200 Hz)	350 Hz / 24 dB/Octave "Linkwitz-Riley"
0.8 liter (System resonance: 155 Hz)	300 Hz / 24 dB/Octave "Linkwitz-Riley"
1.2 liter (System resonance: 140 Hz)	250 Hz / 24 dB/Octave "Linkwitz-Riley"

Note: The enclosure should always be filled with appropriate damping material.

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Made in Germany

