

**Part # 82152****6.5" XBL² Low Distortion Woofer, Truncated Frame**

Key Features

- XBL² motor design with 9.5 mm linear, Klippel verified, X-max
- Truncated, vented cast aluminum frame for line array mounting
- Abaca fiber cone body with damped rubber surround
- 1.5" voice coil with light weight copper clad aluminum wire
- Dual inside-outside copper shorting rings for ultra-low distortion.
- High energy neodymium ring magnet for lighter weight XBL² design
- Designed and assembled in the USA

Primary Specifications

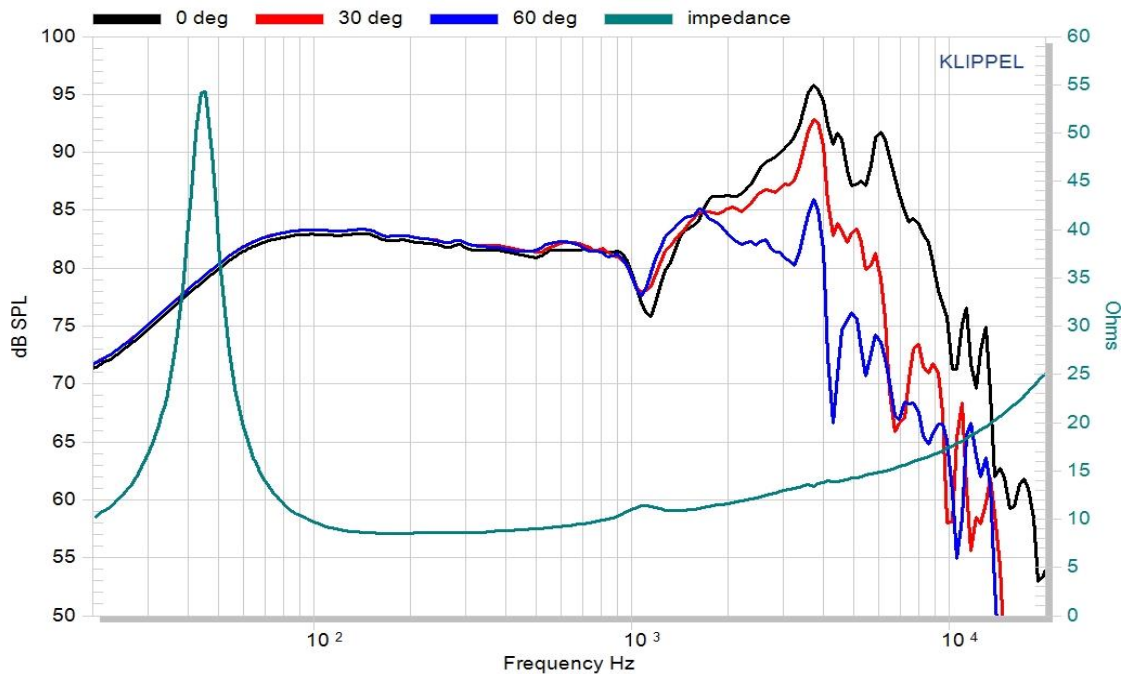
Size, Nominal (inch & mm)	6.5" (165 mm)
Nominal Impedance (Z) (Ω)	8
Rated Power IEC268-5 (W)	85 (170 watts peak)
Sensitivity (dB SPL) ¹ (@1W/1 m)	86
Frequency range (Hz)	40 – 1,000
Resonant Frequency (Fs) (Hz)	45

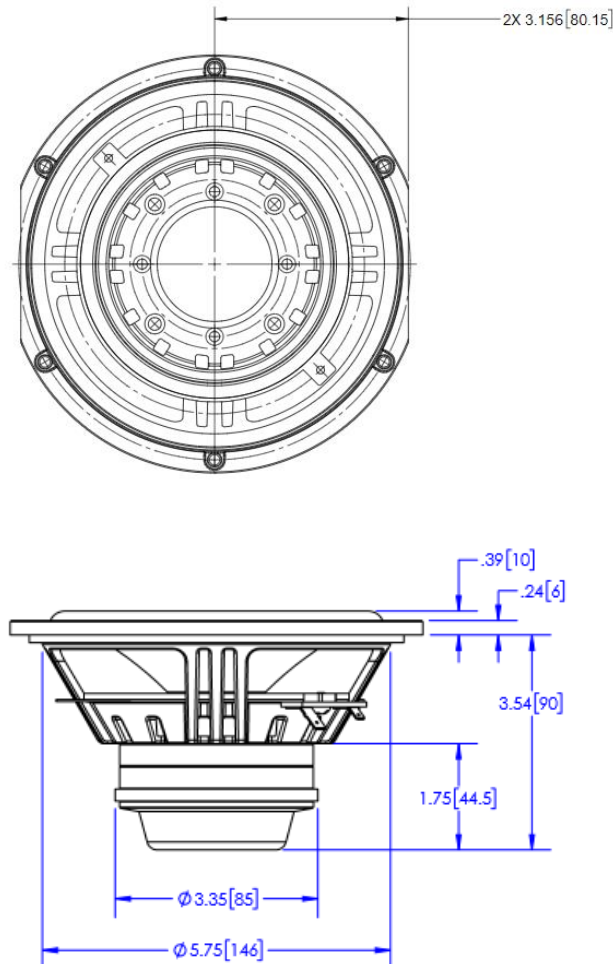
Product Description

An exceptional ultra-low distortion woofer that allows for a wide range of cross-over points. MISCO has taken the XBL² technology and executed with effectiveness and elegance in the 82152, 6.5" woofer. This model's excursion mimics that of a classic 10" woofer, making it one of the best producers of low-end frequencies for a driver of its size. A light weight, copper-clad aluminum voice coil travels in a double magnetic gap. It is centered within inner and outer inductance modulating elements to reduce inductance.

Sensitivity & Impedance Curves

Input: 2.83 volts measured at 1 Meter



**Part # 82152****6.5" XBL² Low Distortion Woofer, Truncated Frame****Transducer Drawings***

*CAD file available upon request

Transducer Specifications (Klippel LPM)

Nominal Impedance (ohms)	8
DC Resistance (Re) (ohms)	6.4
Resonant Frequency (Fs) (Hz)	45
Voice Coil Inductance (Le) (mHz)	0.2
Mechanical Q factor (Qms)	8.4
Electrical Q factor (Qes)	0.65
Total Q factor (Qts)	0.61
Moving Mass (Mms) (g)	22.0
without air load (Mmd) (g)	20.5
Compliance (Cms) (mm/N)	0.44
Mechanical Resistance (Rms) (kg/s)	0.87
Effective Piston Area (Sd) (cm ²)	109
Suspension Equivalent Volume (Vas) (liters)	7.5
Force Factor (Bl) (T*m)	8.2
Efficiency (No) (%)	0.15
SPL (dB 1W/Z)	85
SPL dB 1W/Re)	84

Transducer Specifications (Klippel LSI)

X _{Bl} @ Bl _{min} =82%	10	mm	Displacement limit due to force factor variation
X _{C, rel} @ C _{min} =75%	9.5	mm	Displacement limit due to compliance variation (relative to peak displacement)
X _L @ Z _{max} =10%	13.5	mm	Displacement limit due to inductance variation
X _d @ d _z =10%	28	mm	Displacement limit due Doppler IM distortion

About Bold North Audio

Bold North Audio products are the most accurate, engineered audio transducers available. Each design requires Klippel vibrational test analyses to verify the key parts of optimal audio performance. While we rely heavily on objective science to lead us, we understand that most of all speakers need to tell the musical truth. Our engineers, musicians, and recording studio veterans are the final judges of when a design is worthy of the Bold North Audio brand.

All Bold North Audio products are assembled in Minnesota, with parts sourced from around the world to produce the highest combination of performance, consistency, and customer value.





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CAD Model Cut-Away

