ZETA ZW 165

165 mm MIDWOOFER



The **ZW 165** is the 165 mm midwoofer of the ZETA series. It plays up to 2.5 kHz in a two-way system with the ZT 30 and below the ZM 80 or ZM 70 in a three-way system. A 38 mm voice coil with 15.5 mm winding height sits in a neodymium motor and drives a NOMEX compound cone of 18.2 g. The aluminium basket with wide-open spokes keeps the space behind the cone clear, and with 92.3 dB at 2.83 V it turns amplifier power efficiently into output.

MEASURED DATA AND SPECIFICATIONS

Electrical

DC resistance	R_{dc}	2.57	Ω
Nominal impedance	Z_N	3	Ω
Resonance frequency	f_s	56.3	Hz

Voice coil

Voice coil diameter		38	mm
Voice coil height		15.5	mm

Q factors

Mechanical Q factor	Q_{ms}	7.79	
Electrical Q factor	Q_{es}	0.62	
Total Q factor	Q_{ts}	0.58	

Mechanical

Moving mass	M_{ms}	18.21	g
Effective piston area	S_d	138.9	cm^2
Mechanical resistance	R_{ms}	0.83	kg/s
Compliance	C_{ms}	0.438	mm/N
Force factor	BL	5.15	Tm
Equivalent air volume	V_{as}	11.98	l

Efficiency

Efficiency	η	0.33	%
Sensitivity 1 W / 1 m	SPL	87.4	dB
Sensitivity 2.83 V / 1 m	SPL	92.3	dB

Installation and construction

Power handling RMS	150	W
Power handling max.	225	W
Linear excursion X_{max}	± 4.75	mm
Outer diameter	167	mm
Bolt circle	156	mm
Mounting diameter	144	mm
Mounting depth	71	mm
Cone	**NOMEX compound**	
Basket	**Aluminium**	
Motor	**Neodymium**	

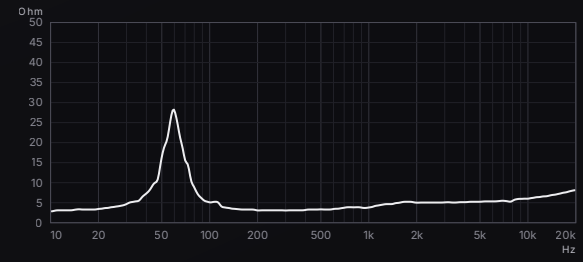
FREQUENCY RESPONSE

1 W / 1 m



IMPEDANCE

free air



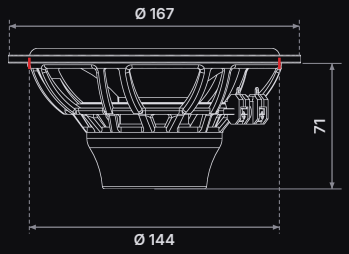
HARMONIC DISTORTION

1 W / 1 m



DIMENSIONS

dimensions in mm



- Recommended active crossover: 80 Hz high-pass, 300 Hz low-pass in a three-way system, 2.5 kHz low-pass in a two-way system with ZT 30, Linkwitz-Riley 24 dB/oct. Use a 100 Hz high-pass for high-output applications.