SPECIFICATIONS

WF275BD01/02 10¾” die cast, paper/fiber-cone mid/woofers 4/8 ohm

The 10.75” transducers WF275BD01 (4 ohm) and WF275BD02 (8 ohm) were designed as high performance bass/midrange units for monitors and high-end hi-fi speakers. They offer outstanding extended bass performance and overall dynamic and detailed reproduction.
Ideal for multi-way constructions they additionally offer designers the rare opportunity of working with 10” 2-way solutions if paired with a suitable tweeter, like for instance some of the Wavecor 30 mm units.

BALANCED DRIVE

FEATURES

- Balanced Drive motor structure for optimal drive force symmetry resulting in largely reduced even order harmonic distortion
- Copper cap on center pole to reduce voice coil inductance and to minimize variations in voice coil inductance as a function of voice coil position
- Cone made of a new paper/glass fiber mix with improved consistency and stability
- Rigid die cast alu chassis with extensive venting for lower air flow speed reducing audible distortion
- Vented voice coil former for reduced distortion and compression
- Vented center pole with dual flares for reduced noise level and compressions at large cone excursions
- Heavy-duty black fiber glass voice coil former to reduce mechanical losses resulting in better dynamic performance and low-level details
- Large motor with 39 mm voice coil diameter for better control and power handling
- Built-in alu field-stabilizing ring for reduced distortion at high levels
- Low-loss suspension (high Qm) for better reproduction of details and dynamics
- Black plated motor parts for better heat transfer to the surrounding air
- Conex spider for better durability under extreme conditions
- Gold plated terminals to ensure long-term trouble free connection

NOMINAL SPECIFICATIONS

Notes	Parameter	WF275BD01		WF275BD02		Unit
		Before burn-in	After burn-in	Before burn-in	After burn-in	
	Nominal size	10¾		10¾		[inch.]
	Nominal impedance	4		8		[ohm]
	Recommended max. upper frequency limit	1.5		1.5		[kHz]
1, 3	Sensitivity, 2.83V/1m	90		87		[dB]
2	Power handling, short term, IEC 268-5, no additional filtering	1,800		1,800		[W]
2	Power handling, long term, IEC 268-5, no additional filtering	450		450		[W]
2	Power handling, continuous, IEC 268-5, no additional filtering	180		180		[W]
	Effective radiating area, S_d	312		312		[cm²]
3, 6	Resonance frequency (free air, no baffle), F_s	27		28		[Hz]
	Moving mass, incl. air (free air, no baffle), M_{ms}	57		54		[g]
3	Force factor, Bxl	8.9		11.8		[N/A]
3, 6	Suspension compliance, C_{ms}	0.59		0.59		[mm/N]
3, 6	Equivalent air volume, V_{as}	81.5		81.5		[lit.]
3, 6	Mechanical resistance, R_{ms}	0.85		0.85		[Ns/m]
3, 6	Mechanical Q, Q_{ms}	11.6		11.3		[-]
3, 6	Electrical Q, Q_{es}	0.38		0.47		[-]
3, 6	Total Q, Q_{ts}	0.37		0.45		[-]
4	Voice coil resistance, R_{DC}	3.1		6.8		[ohm]
5	Voice coil inductance, L_e (measured at 1 kHz)	0.14		0.23		[mH]
	Voice coil inside diameter	39		39		[mm]
	Voice coil winding height	23		23		[mm]
	Air gap height	5		5		[mm]
	Theoretical linear motor stroke, Xmax	±9		±9		[mm]
	Magnet weight					[g]
	Total unit net weight excl. packaging					[kg]
3, 5	K_{rm}					[mohm]
3, 5	E_{rm}					[-]
3, 5	K_{xm}					[mH]
3, 5	E_{xm}					[-]

Note 1 *Measured in infinite baffle.*
Note 2 *Tested in free air (no cabinet).*
Note 3 *Measured using a semi-constant current source, nominal level 2 mA.*
Note 4 *Measured at 25 deg. C*
Note 5 *It is generally a rough simplification to assume that loudspeaker transducer voice coils exhibit the characteristics of an inductor. Instead it is a far more accurate approach to use the more advanced model often referred to as the “Wright empirical model”, also used in LEAP-4 as the TSL model (www.linearx.com), involving parameters K_{rm}, E_{rm}, K_{xm}, and E_{xm}.* This more accurate transducer model is described in a technical paper **here at our web site.**
Note 6 After burn-in specifications are measured 12 hours after exiting the transducer by a 20 Hz sine wave for 2 hours at level 10/14.1 V_{RMS} (4/8 ohm version). The unit is not burned in before shipping.

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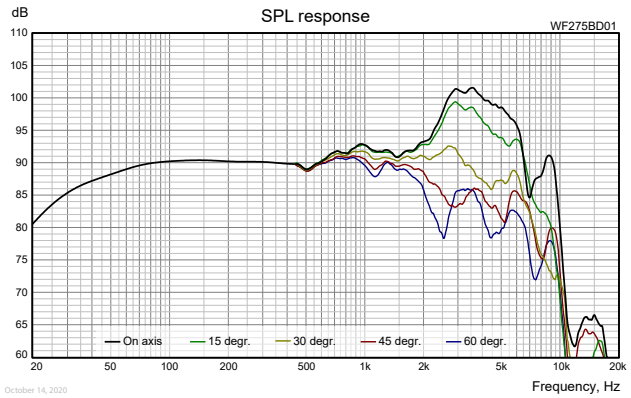
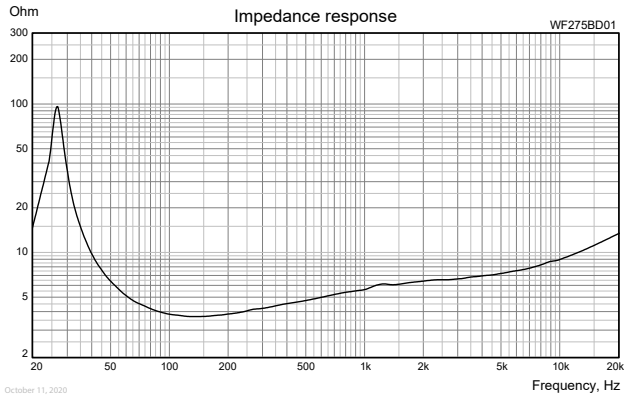


Important!

Please observe that graphs on the left side of this page and the below text files for download are actual measurements of the drivers measured in infinite baffle and without any enclosure. Measuring the drivers in a finite baffle (like the baffle of most speaker cabinets) and in any size of enclosure will lead to different response curves.

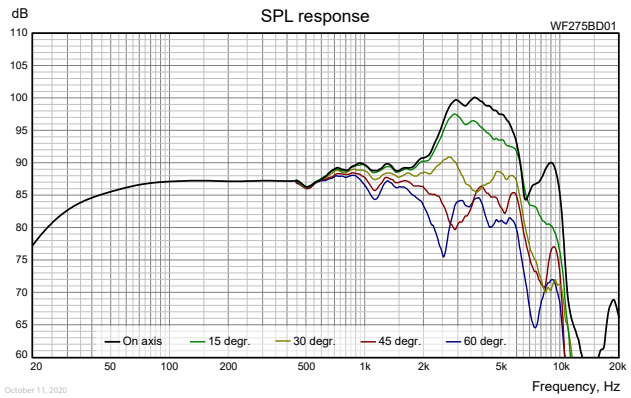
Download WF275BD01 on-axis SPL response as .txt file

Measuring conditions, SPL
Driver mounting: Flush in infinite baffle, back side open (no cabinet)
Microphone distance: 1.0 m
Input signal: 2.83 VRMS stepped sine wave
Smoothing: 1/6 oct.



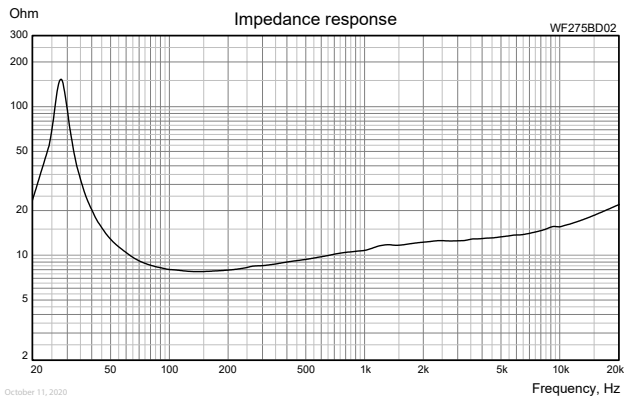
Download WF275BD01 Impedance response as .txt file

Measuring conditions, impedance
Driver mounting: Free air, no baffle, back side open (no cabinet)
Input signal: Stepped sine wave, semi-current-drive, nominal current 2 mA
Smoothing: None



Download WF275BD02 on-axis SPL response as .txt file

Measuring conditions, SPL
Driver mounting: Flush in infinite baffle, back side open (no cabinet)
Microphone distance: 1.0 m
Input signal: 2.83 VRMS stepped sine wave
Smoothing: 1/6 oct.



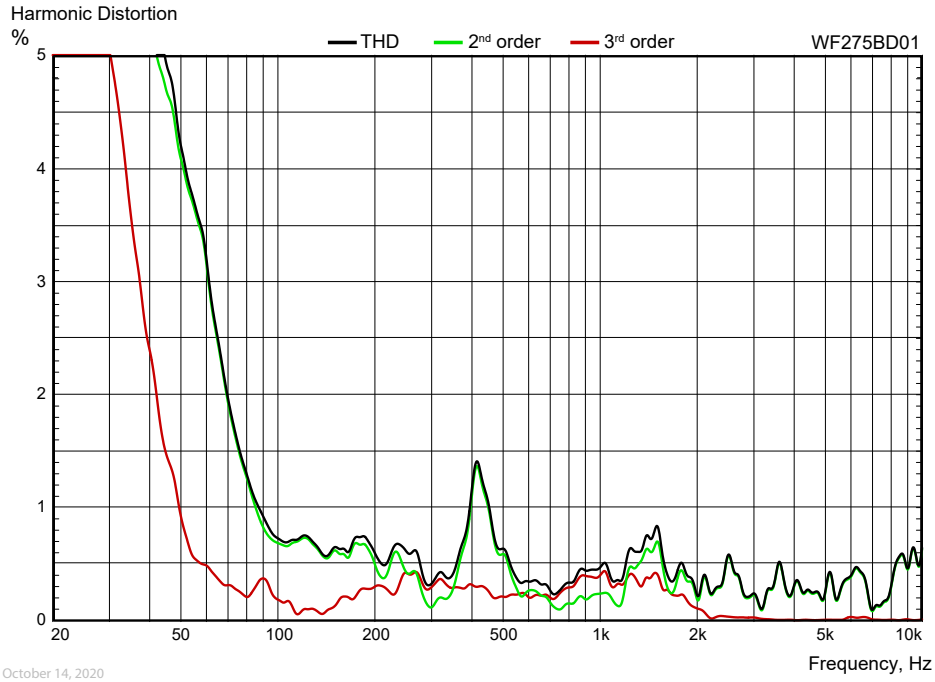
Download WF275BD02 Impedance response as .txt file

Measuring conditions, impedance
Driver mounting: Free air, no baffle, back side open (no cabinet)
Input signal: Stepped sine wave, semi-current-drive, nominal current 2 mA
Smoothing: None

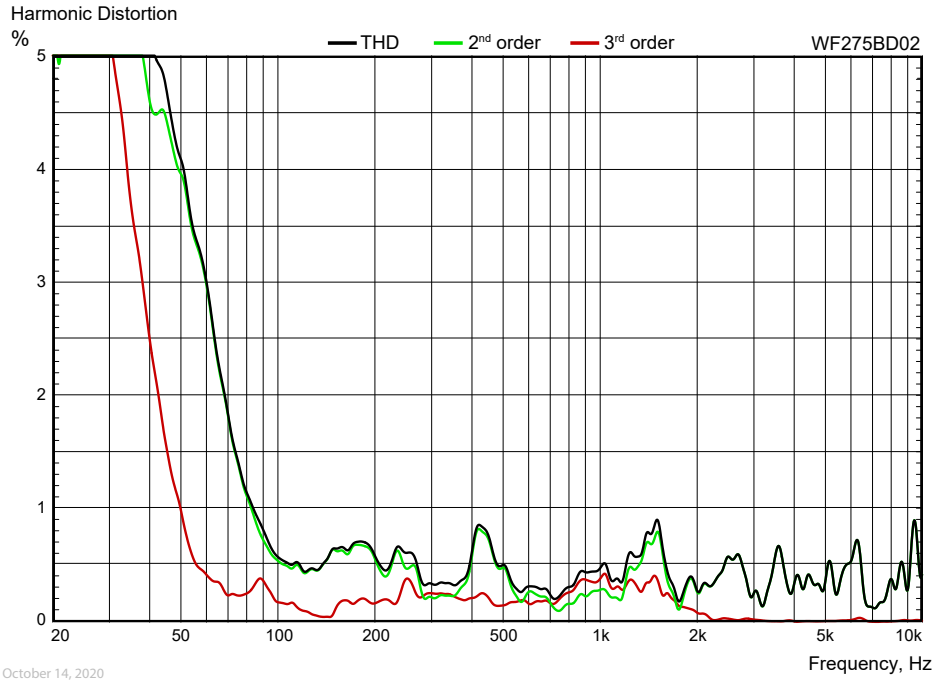
For more information please visit www.Wavecor.com

SPECIFICATIONS

WF275BD01/02 10¾” die cast, paper/fiber-cone mid/woofers 4/8 ohm



Measuring conditions, distortion
Driver mounting: Flush in infinite baffle, back side open (no cabinet)
Input voltage: 8.5 VRMS
Smoothing: 1/12 oct.



Measuring conditions, distortion
Driver mounting: Flush in infinite baffle, back side open (no cabinet)
Input voltage: 12.0 VRMS
Smoothing: 1/12 oct.

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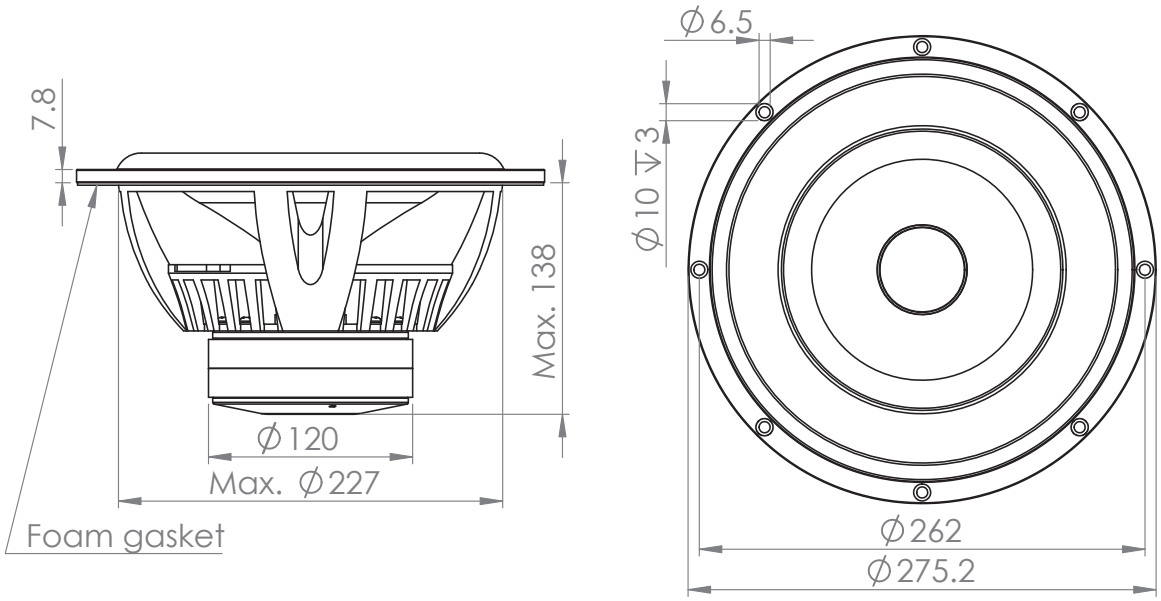
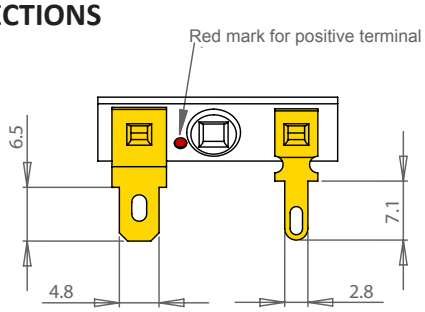
OUTLINE DRAWING (nominal dimensions)

Dimensions in mm



CONNECTIONS



Thickness, both terminals: 0.5 mm
Terminal plating: Gold

PACKAGING AND ORDERING INFORMATION

Part no. WF275BD01-01	4 ohm version, individual packaging (one piece per box)
Part no. WF275BD02-01	8 ohm version, individual packaging (one piece per box)

Latest update: October 18, 2020