

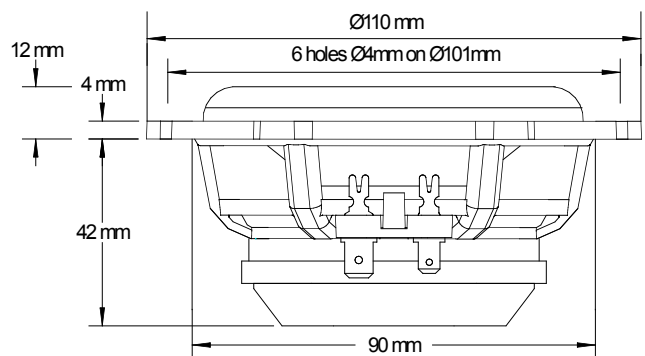
# Woofer Esotar<sup>2</sup> 430

The Esotar<sup>2</sup> 430 is a midrange designed for 2-way or 3-way systems. It delivers an impressive clarity and natural reproduction in almost any application.

The driver exhibits a very linear frequency response and a good dispersion from 200Hz and up to 7kHz, even 60 degrees off-axis. This, combined with the low distortion and the linear impedance, makes it possible to achieve excellent results.

The driver is a simple load for the amplifier and the use of an impedance correction circuit will make it even simpler. The low suspension compliance makes the driver suitable for small enclosures normally used in cars.

- Diaphragm and dust cap moulded as one piece
- Internal double magnet system with vented pole piece
- Magnetsystem with neodymium magnet and vented pole piece
- Aluminium voice coil wire provides for a low moving mass, wound on aluminium former
- Rigid die-cast chassis with aerodynamically shaped ribs
- Materials and parameters are optimized for the harsh environmental conditions in a car
- Smooth high-frequency roll-off
- Natural midrange reproduction



| Thiele Small Parameters       |             |                    |
|-------------------------------|-------------|--------------------|
| Nominal impedance             | Znom        | 4 Ω                |
| DC resistance                 | Re          | 4 Ω                |
| Voice coil inductance         | Le          | 0,19 mH            |
| Resonance frequency           | Fs          | 64 Hz              |
| Mechanical Q factor           | Qms         | 1,5                |
| Electrical Q factor           | Qes         | 0,21               |
| Total Q factor                | Qts         | 0,18               |
| Mechanical resistance         | Rms         | 1,3 kg/s           |
| Moving mass (incl. air load)  | Mms         | 4,9 g              |
| Suspension compliance         | Cms         | 1,2 mm/N           |
| Effective cone diameter       | D           | 75 mm              |
| Effective piston area         | Sd          | 45 cm <sup>2</sup> |
| Equivalent volume             | Vas         | 3,5 l              |
| Force factor                  | Bl          | 6,2 Tm             |
| Recommended frequency range   | 200-7000 Hz |                    |
| Recommended closed box volume | 0,5-4 l     |                    |

| Magnet and Voice Coil Properties |    |        |
|----------------------------------|----|--------|
| Voice coil diameter              | dc | 34 mm  |
| Voice coil height                | hc | 9,5 mm |
| Voice coil layers                | nc | 2      |
| Magnetic gap height              | hg | 5 mm   |
| Linear excursion, peak to peak   |    | 4,9 mm |
| Max. excursion, peak to peak     |    | 21 mm  |
| Magnet weight:                   |    |        |
| Neodymium                        | wm | 0,1 kg |

| Power Handling                                     |        |
|--|--------|
| Nominal long term IEC                              | 150 W  |
| Nominal long term IEC, with 250Hz high pass filter | 200 W  |
| Transient (10 ms)                                  | 1000 W |

| Mechanical Properties |            |
|-----------------------|------------|
| Net weight            | 0,47 kg    |
| Overall dimension     | Ø110x49 mm |

All specifications subject to change without notice

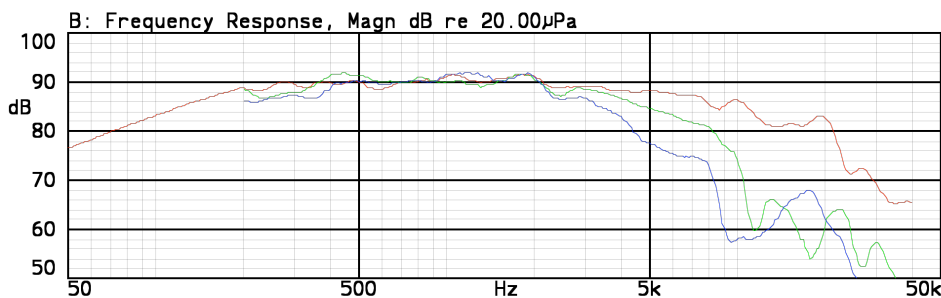
Dynaudio A/S, 8660 Skanderborg, Denmark

Sales & Marketing

Dynaudio International GmbH, Ohepark 2, 21224 Rosengarten, Germany, Phone +49 4108 - 4180 - 0

# Woofer Esotar<sup>2</sup> 430

Frequency response • on-axis, 30° and 60° off-axis



Red line: on-axis response  
Green line: 30° horizontal  
Blue line: 60° horizontal

Measurement conditions

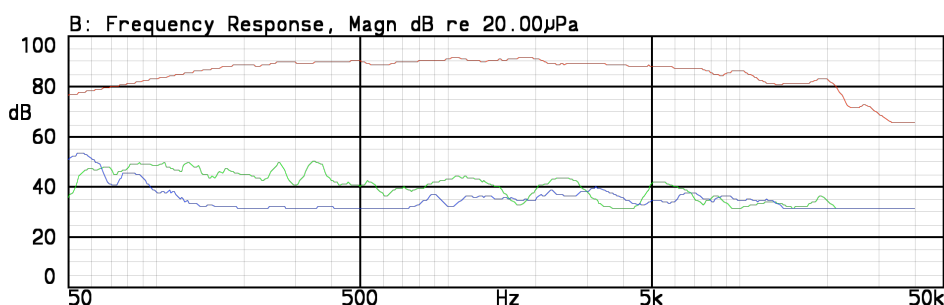
Level: 2.83 V  
Distance: 1 m  
Box volume: 4 l

15-OCT-2008 10:16:22

Mode: SSR



Frequency response • 2nd and 3rd harmonic distortion



Red line: on-axis response  
Green line: 2nd harmonic  
Blue line: 3rd harmonic

Measurement conditions

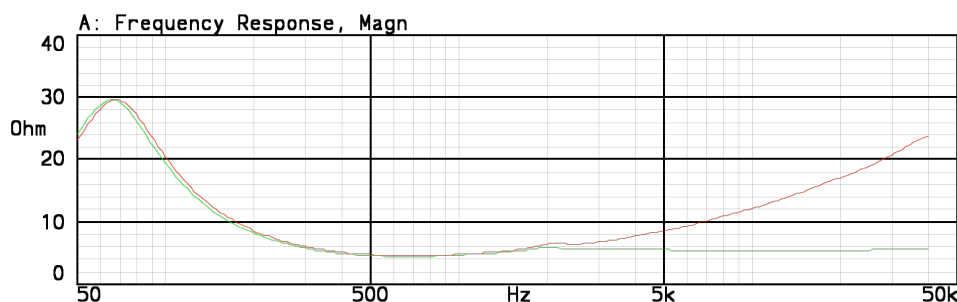
Level: 2.83 V  
Distance: 1 m  
Box volume: 4 l

15-OCT-2008 10:14:16

Mode: SSR



Impedance • with and without impedance correction circuit



Red line: impedance, free air  
green line: impedance, free air  
with compensation. See drawing below.

Measurement conditions

Level: 3,16 V, 50 ohm  
Driver in free air

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Mode: SSR



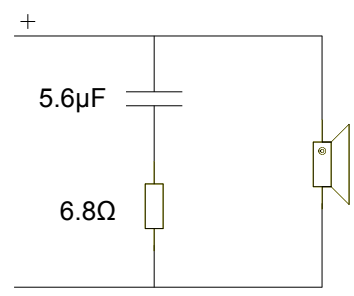
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Impedance correction circuit



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