

8WRS300

LOW FREQUENCY TRANSDUCER

**WRS Series** 

## **KEY FEATURES**

- High power handling: 600 W program power
- 2" copper wire voice coil
- High sensitivity: 95 dB (1W / 1m)
- FEA optimized ceramic magnetic circuit
- Low harmonic distortion and linear response

- Waterproof cone with treatment on both sides of the cone
- Optimized pressed steel frame
- Extended controlled displacement: Xmax ± 6 mm
- 32 mm peak-to-peak excursion before damage
- Wide range of applications of low and mid-low frequencies



# TECHNICAL SPECIFICATIONS

| Nominal diameter                   | 200 mm                | 8 in             |
|------------------------------------|-----------------------|------------------|
| Rated impedance                    |                       | 8 Ω              |
| Minimum impedance                  |                       | 7,6 Ω            |
| Power capacity <sup>1</sup>        | 300 W <sub>AES</sub>  |                  |
| Program power <sup>2</sup>         | (                     | 600 W            |
| Sensitivity                        | 95 dB 1W / 1m         | @ Z <sub>N</sub> |
| Frequency range                    | 65 - 4.000 Hz         |                  |
| Recom. enclosure                   | V <sub>b</sub> = 12 I |                  |
| (Bass-reflex design)               | F <sub>b</sub> =      | 70 Hz            |
| Voice coil diameter                | 50,8 mm               | 2 in             |
| BI factor                          | 15                    | ,2 N/A           |
| Moving mass                        | 0,0                   | )28 kg           |
| Voice coil length                  | 1                     | l5 mm            |
| Air gap height                     |                       | 8 mm             |
| X <sub>damage</sub> (peak to peak) | 3                     | 32 mm            |



# THIELE-SMALL PARAMETERS<sup>3</sup>

| Resonant frequency, f <sub>s</sub>                         | 65 Hz                |
|--|----------------------|
| D.C. Voice coil resistance, R <sub>e</sub>                 | 6 Ω                  |
| Mechanical Quality Factor, Q <sub>ms</sub>                 | 5,4                  |
| Electrical Quality Factor, Q <sub>es</sub>                 | 0,30                 |
| Total Quality Factor, Q <sub>ts</sub>                      | 0,28                 |
| Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub> | 15 I                 |
| Mechanical Compliance, C <sub>ms</sub>                     | 214 μm / N           |
| Mechanical Resistance, R <sub>ms</sub>                     | 2,1 kg / s           |
| Efficiency, η <sub>0</sub>                                 | 1,3 %                |
| Effective Surface Area, S <sub>d</sub>                     | 0,022 m <sup>2</sup> |
| Maximum Displacement, X <sub>max</sub> <sup>4</sup>        | 6 mm                 |
| Displacement Volume, V <sub>d</sub>                        | 132 cm <sup>3</sup>  |
| Voice Coil Inductance, L <sub>e</sub> @ 1 kHz              | 0,9 mH               |

Notes:

<sup>1</sup> The power capaticty is determined according to AES2-1984 (r2003) standard.

<sup>2</sup> Program power is defined as power capacity + 3 dB.

<sup>3</sup> T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

<sup>4</sup> The X<sub>max</sub> is calculated as (L<sub>vc</sub> - H<sub>ag</sub>)/2 + (H<sub>ag</sub>/3,5), where L<sub>vc</sub> is the voice coil length and H<sub>ag</sub> is the air gap height.

8WRS300

#### LOW FREQUENCY TRANSDUCER

**WRS Series** 



120 180 160 100 140 80 120 100 [dB] G 60 80 40 60 40 20 20 0 0 100 10 k 1 k [Hz]

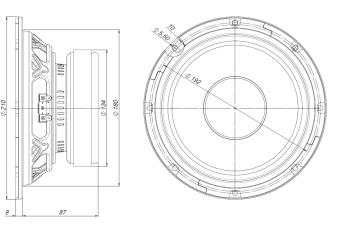
Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m  $\,$ 

Frequency response on axis Frequency response 45° off axis

## **MOUNTING INFORMATION**

| Overall diameter        | 210 mm  | 8,27 in |
|-------------------------|---------|---------|
| Bolt circle diameter    | 192 mm  | 7,56 in |
| Baffle cutout diameter: |         |         |
| - Front mount           | 180 mm  | 7,08 in |
| Depth                   | 95 mm   | 3,74 in |
| Net weight              | 3,25 kg | 7,2 lb  |
| Shipping weight         | 3,55 kg | 7,8 lb  |
|                         |         |         |

### **DIMENSION DRAWING**



09/19