**12ND930**

**Key Features**
- 98 dB SPL 1W/1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 500 W AES power handling
- External neodymium magnet assembly
- Double Demodulating Rings (DDR) for lower distortion
- Humidity resistant cone
- Ideal for 2 way systems and compact high loading subwoofer applications

**Description**

The 12ND930 is a high power, high output, low frequency woofer meeting the most stringent requirements in high quality professional transducers. The high level of performance and sound quality have been achieved by exploiting the most advanced technologies available today. Thanks to its versatility, the 12ND930 can be used in two-way compact reflex enclosures with a 1.4" compression driver, in multi-way systems and in high loading sub-woofers as small as 50 lt (compact reflex, band-pass and hornloaded configurations). The neodymium magnet assembly assures high flux concentration, low power compression and excellent heat exchange, since the external magnet configuration is considerably more efficient than traditional under-pole magnet topology. This results in high levels of force factor and power handling with an optimum power to weight ratio. The direct contact between the large heat sink and the basket, together with the magnetic structure, represents a fundamental improvement in thermal connection and heat dissipation. The result is increased power handling capabilities and lower power compression. The curvilinear cone profile, created with a special high strength wood pulp, has been designed to achieve the best possible linearity within its frequency range. The cone surround in linen material is highly resistant to aging and fatigue. The in-house developed cone treatment is a humidity repellent and significant dampens bell mode resonance. The 12ND930 employs our Interleaved Sandwich Voice coil (ISV) in which a high strength fiberglass former carries windings on both the outer and inner surfaces to achieve a mass balanced coil. The final result is an extremely linear motor assembly with a reduced tendency for eccentric behavior when driven hard. The already low distortion and sound quality are further improved by Double Demodulating Rings (DDR), that flatten impedance and phase figures with a constant power transfer. A special coating applied to both the top and back plates makes the 12ND930 far more resistant to the corrosive effects of salts and oxidization.

**Models**

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>022128N220</td>
<td>022128N220</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>12ND930</td>
<td>12ND930</td>
<td></td>
</tr>
</tbody>
</table>
# General Specifications

- **Nominal Diameter**: 300mm (12 in)
- **Rated Impedance**: 8 Ohm
- **AES Power**: 500W
- **Program Power**: 800W
- **Peak Power**: 1600W
- **Sensitivity**: 98dB
- **Frequency Range**: 46 ÷ 4500 Hz
- **Power Compression @-10dB**: 0,9 dB
- **Power Compression @-3dB**: 2,2 dB
- **Power Compression @Full Power**: 3,1 dB
- **Max Recommm. Frequency**: 2000 Hz
- **Recomm. Enclosure Volume**: 30 ÷ 100 lt. (1,06 ÷ 3,53 cuft)
- **Minimum Impedance**: 6,4 Ohm at 25°C
- **Max Peak To Peak Excursion**: 30 mm (1,18 in)
- **Voice Coil Diameter**: 75 mm (3 in)
- **Voice Coil Winding Material**: copper
- **Suspension**: M-roll, Polycotton
- **Cone**: Curvilinear, Treated Paper

# Thiele Small Parameters

- **Fs**: 50 Hz
- **Re**: 5,5 Ohm
- **Sd**: 0,0531 sq.mt. (82,31 sq.in.)
- **Qms**: 0,64
- **Qes**: 0,218
- **Qts**: 0,21
- **Vas**: 70 lt. (2,47cuft)
- **Mms**: 57 gr. (0,13 lb)
- **BL**: 21,2 Tm
- **Linear Mathematical Xmax**: ± 6,5 mm (± 0,26 in)
- **Le (1kHz)**: 1,65 mH
- **Ref. Efficiency 1W@1m (half space)**: 98 dB

# Mounting information

- **Overall diameter**: 315 mm (12,4 in)
- **N. of mounting holes and bolt**: 8
- **Mounting holes diameter**: 7,15 mm (0,28 in)
- **Bolt circle diameter**: 296-300 mm (11,65-11,8 in)
- **Front mount baffle cutout ø**: 282 mm (11,1 in)
- **Rear mount baffle cutout ø**: 282 mm (11,1 in)
- **Total depth**: 140 mm (5,52 in)
- **Flange and gasket thickness**: 11,5 mm (0,45 in)
- **Net weight**: 4 kg (8,83 lb)
- **Shipping weight**: 4,8 kg (10,6 lb)
- **CardBoard Packaging dimensions**: 332 x 332 x 184 mm(13,07 x 13,07 x 7,24 in)

---

**Notes**

1) AES power is determined according to AES2-1984 (2003) standard.
2) Program power rating is measured in 50 lit enclosure tuned at 60Hz using a 40-400Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
3) The peak power rating represents the maximum permitted instantaneous peak power level over a maximum period in which no overheating of the loudspeaker unit will occur.
4) Sensitivity is measured on the forward central axis of cone, at distance 1m from the baffle panel, when connected to a 2,83V sine wave test signal swept between 100Hz and 500Hz.
5) Frequency range is given as the band of frequencies delineated by the lower and upper limits where the output level drops by 10 dB below the rated sensitivity in half space environment.
6) Power compression represents the loss of sensitivity for the specified power, measured from 50-500 Hz, after a 5 min pink noise preconditioning test at the specified power.
7) Linear Math. Xmax is calculated as $\frac{Hvc-Hg}{2} + \frac{Hg}{4}$ where $Hvc$ is the coil depth and $Hg$ is the gap depth.