405-8H and 405-8HT LOUDSPEAKERS

SPECIFICATIONS

Power Rating: 15 watts continuous pink noise (above 50 Hz)
Frequency Response: 60-15,000 Hz
Pressure Sensitivity: 91 dB SPL measured at 4' on axis with 1 watt input of pink noise, band-limited from 500-3000 Hz (Ref.: 0 dB = 0.0002 dynes/cm²)
Impedance: 8 ohms
25/70 Volt Taps: 4, 2, 1, 0.5 watts (Model 405-8HT only)
Insertion Loss: 1.0 dB max. (405-8HT only)
Transformer Frequency Response: ±1 dB, 100-10,000 Hz (Model 405-8HT only)
Nominal Free-Air Cone Resonance: 120 Hz
Nominal Distribution Pattern: 90°
*Distribution Pattern With Polar to Planer Correction: 107° at 2 kHz
69° at 4 kHz
Voice Coil Diameter: 1”
Magnet Structure — Magnet Type: Ceramic (V)
Magnet Weight: 1¾ pounds
Flux Density: 10,250 gauss
Construction — Frame (Basket): Structurally reinforced die-cast aluminum
Cone: Molded fiber
Cone Suspension: High-compliance foam surround
Voice Coil: Copper
Voice Coil Support Material: Kapton®**
Cone Excursion: 0.125” max. peak to peak
Terminals — Speaker: 0.205” (0.52 cm) spade lug type
Transformer: Pigtauls
Mounting Data — Baffle Opening: 3.812” (9.68 cm) diameter (rear mounted)
4.125” (10.48 cm) diameter (front mounted)
Mounting Bolt Centers: 4 equally spaced slots 90° apart on 4.75” (12.07 cm) diameter circle
Dimensions — Model 405-8H: 5.132” (13.49 cm) diameter
Model 405-8HT: 2.125” (5.40 cm) depth
Model 405-8HT: 4.063” (10.32 cm) depth
Weight — Model 405-8H: 2 lbs. 1 oz. (0.94 kg)
Model 405-8HT: 2 lbs. 9 oz. (1.2 kg)
Color: ALTEC black

*See Technical Letter No. 257, “Sound Distribution on a Plane Normal to a Loudspeaker Axis.”
**Kapton® is a registered trademark of DuPont.

DESCRIPTION

The Altec Lansing Model 405-8H and 405-8HT loudspeakers are compact 4” speakers that provide the utmost in performance obtainable from speakers of this size. Clear, intelligible speech and good music reproduction are ensured because of the extended 60-15,000 Hz range.

Loudspeaker impedance rating is 8 ohms. The Model 405-8HT incorporates a 70-volt line transformer for applications in distributed sound systems.

These quality loudspeakers are designed for continuous, trouble-free service. The frame and housing of the magnetic structures are fabricated of heavy-gauge steel. The small size of the speakers allows either front or rear mounting in walls, partitions, ceilings, and into volumes as low as 0.1 cubic feet.
### Mounting Dimensions

<table>
<thead>
<tr>
<th>MOUNTING DIMENSIONS</th>
<th>MODEL 405-8H</th>
<th>MODEL 405-8HT</th>
<th>LEAD COLOR</th>
<th>WATTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) LOUDSPEAKER DIAMETER:</td>
<td>5.312” (13.49 cm)</td>
<td>5.312” (13.49 cm)</td>
<td>Black</td>
<td>4W</td>
</tr>
<tr>
<td>(B) LOUDSPEAKER DEPTH:</td>
<td>2.125” (5.40 cm)</td>
<td>4.063” (10.32 cm)</td>
<td>Green</td>
<td>2W</td>
</tr>
<tr>
<td>(C) BAFFLE OPENING DIAMETER:</td>
<td>4.125” (10.48 cm)</td>
<td>4.125” (10.48 cm)</td>
<td>Yellow</td>
<td>1W</td>
</tr>
<tr>
<td>(Front Mounted)</td>
<td></td>
<td></td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>(C) BAFFLE OPENING DIAMETER:</td>
<td>3.812” (9.68 cm)</td>
<td>3.812” (9.68 cm)</td>
<td>Brown</td>
<td>½ W</td>
</tr>
<tr>
<td>(Rear Mounted)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(D) BOLT CIRCLE DIAMETER:</td>
<td>4.75” (12.07 cm)</td>
<td>4.75” (12.07 cm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(E) BOLT HOLE SLOTS:</td>
<td>0.20” (0.52 cm) x 0.25” (0.64 cm)</td>
<td>0.20” (0.52 cm) x 0.25” (0.64 cm)</td>
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</tbody>
</table>

### Architect's and Engineer's Specifications

**MODEL 405-8H**

The loudspeaker shall meet the following performance and structural criteria. Power rating, 15 watts. Frequency response, uniform from 60-15,000 Hz. Pressure sensitivity, 91 dB SPL when measured at 4’ on axis with 1 watt input of band-limited pink noise from 500-3000 Hz (Ref.: 0 dB = 0.0002 dyne/cm²). Impedance, 8 ohms. Nominal free-air cone resonance, 120 Hz. The voice coil shall have a diameter of 1” and shall operate in a magnetic field of 10,250 gauss derived from a ceramic (V) magnet weighing at least 1¼ pounds. The loudspeaker shall be able to perform efficiently in a volume as low as 0.1 cubic feet. The loudspeaker frame shall be of solid, welded steel construction. The speaker terminals shall be of the spade lug type. Dimensions, 5.312” diameter x 2.125” deep. Weight, 2 pounds, 1 ounce.

The loudspeaker shall be the Altec Lansing Model 405-8H.

**MODEL 405-8HT**

The loudspeaker shall meet the following performance and structural criteria. Power rating, 15 watts. Frequency response, uniform from 60-15,000 Hz. Pressure sensitivity, 91 dB SPL when measured at 4’ on axis with 1 watt input of band-limited pink noise from 500-3000 Hz (Ref.: 0 dB = 0.0002 dyne/cm²). Impedance, 8 ohms. Nominal free-air cone resonance, 120 Hz. The voice coil shall have a diameter of 1” and shall operate in a magnetic field of 10,250 gauss derived from a ceramic (V) magnet weighing at least 1¼ pounds. The loudspeaker shall be able to perform efficiently in a volume as low as 0.1 cubic feet. The loudspeaker frame shall be of solid, welded steel construction. The speaker terminals shall be of the spade lug type. Dimensions, 5.312” diameter x 4¾” deep. Weight, 2 pounds, 9 ounces.

A 70-volt line transformer shall be incorporated for use in distributed systems, and shall have a frequency response of ±1 dB from 100-10,000 Hz, with maximum insertion loss of 1.0 dB and primary wattage taps of 4, 2, 1 and 0.5 watts.

The loudspeaker shall be the Altec Lansing Model 405-8HT.