**R399**

**In-Hull**

**2 - 3 kW**

**Fishing Applications**
- Offshore and long-range blue-water fishing
- Commercial fishing
- Deep-water canyon and sea-mount tracking

**Features**
- The best in-hull performer in Airmar’s professional line of fishfinder transducers for vessels 12 m (40’) and up
- Only 3 kW in-hull transducer on the market that can operate at 28 kHz, 38 kHz, or 45 kHz
- Depth only
- Super low ringing for accurate discrimination between closely spaced targets
- Recommended for solid fiberglass hulls
- Non-toxic anti-freeze (propylene glycol) is used to fill the tank
- Fiberglass resin is used to adhere tank to the hull

**Frequency Agility**

Airmar’s new R399 transducer is different from the R299 because it operates at lower frequencies between **25 kHz to 45 kHz** and **130 kHz to 210 kHz**. Adjusting the frequency allows you to change the R399’s beamwidth and depth capabilities. For example if you are bottom fishing in 61 m (200’) of water, the narrow high-frequency beam will display extreme bottom detail and fish holding tight to structure. If you are tuna or marlin fishing in deep blue water, the wider, low-frequency beam will not only give deep-water bottom detail, but more importantly show you more of what is around your vessel—including bait which may attract game fish.

**Tunable Fishfinding**

Because the R399 can operate over a broad high and low-frequency range, next generation fishfinders can be made “tunable”, so fishermen can “dial-in” the best frequency for the target fish species or conditions.
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### Technical Information

**25-45 kHz-A / 130-210 kHz**

<table>
<thead>
<tr>
<th><strong>Number of Elements and Configuration</strong></th>
<th>Adjustable</th>
<th>Adjustable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beamwidth (@ -3 dB)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RMS Power (W)</strong></td>
<td>3 kW</td>
<td>2 kW</td>
</tr>
<tr>
<td><strong>TVR</strong></td>
<td>169 dB @ 50 kHz</td>
<td>172 dB @ 200 kHz</td>
</tr>
<tr>
<td><strong>RVR</strong></td>
<td>-167 dB @ 50 kHz</td>
<td>-184 dB @ 200 kHz</td>
</tr>
<tr>
<td><strong>FOM</strong></td>
<td>-5 dB @ 50 kHz</td>
<td>-12 dB @ 200 kHz</td>
</tr>
<tr>
<td><strong>Q</strong></td>
<td>3 @ 50 kHz</td>
<td>3 @ 200 kHz</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>187 Ω @ 38 kHz</td>
<td>185 Ω @ 50 kHz</td>
</tr>
<tr>
<td></td>
<td>169 Ω @ 140 kHz</td>
<td>250 Ω @ 50 kHz</td>
</tr>
<tr>
<td></td>
<td>208 Ω @ 200 kHz</td>
<td>314 Ω @ 200 kHz</td>
</tr>
</tbody>
</table>

*Does not calculate losses through the hull.

### SPECIFICATIONS

- **Weight:** 24.8 kg (54.8 lb)
- **Hull Deadrise:** 0° to 22°
- **Acoustic Window:** Epoxy/urethane
- **All mounting hardware provided, including tank**

### DIMENSIONS

#### MAXIMUM DEPTH RANGE

<table>
<thead>
<tr>
<th><strong>Low-Frequency</strong></th>
<th><strong>High-Frequency</strong></th>
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<tbody>
<tr>
<td>914 m to 1,372 m</td>
<td>235 m to 353 m</td>
</tr>
<tr>
<td>(3,000' to 4,500')</td>
<td>(800' to 1,200')</td>
</tr>
</tbody>
</table>

### Directivity Pattern

- **25 kHz**
  - 3 dB Beamwidth 10° x 17°
- **45 kHz**
  - 3 dB Beamwidth 7° x 13°
- **140 kHz**
  - 3 dB Beamwidth 7°
- **200 kHz**
  - 3 dB Beamwidth 5°

### Figure of Merit

The graphs show that the R399 can run optimally at a wide range of frequencies.