

# 61.6 ft

Medium Chirp

IN-HULL

Auto G  
39 C

## In-Hull Chirp Transducers

Unlock the true potential of your fishfinder with the superior quality and performance of an AIRMAR Chirp-ready transducer.

*P75M screenshot courtesy of Navico*

### The Benefits of AIRMAR's Chirp-ready Transducers

- One broadband transducer covers up to 117 kHz of bandwidth – greater opportunities to detect fish in the water column
- Superior resolution – precise separation between baitfish and gamefish represented on the display with crisp images
- Enhanced bottom definition – resolve targets close to the bottom or near structure/wrecks
- Amazing detail – recognize haloclines and thermoclines
- Improved signal to noise ratio – find fish and track bottom at high boat speeds

### Benefits of In-Hull Transducers

In-Hull transducers are installed inside the boat hull. The transducer is suspended in a liquid filled tank and transmits sonar directly through the solid fiberglass hull. And, the wide frequency band of a Chirp transducer allows you to select the best frequency for your hull's thickness.

### Other Advantages:

- No holes to be drilled through the hull
- Installation and service can be performed while the boat is in the water
- No exposure to marine growth; no drag
- Ideal for trailered boats and tough to fit, multi-hulled boats



**AIRMAR®**, DEFINING CHIRP TECHNOLOGY.

**AIRMAR®**  
TECHNOLOGY CORPORATION

# Why does frequency matter?

Selecting the best frequency for your specific application is very important. The good news is that once you know what frequency will work best for the type of fishing you do, there's an AIRMAR transducer designed to maximize the performance of your sounder.

AIRMAR Chirp transducers are available in various frequency combinations:

- Dual Band:
  - Low/High (LH)
  - Low/Medium (LM)
  - Low/High Wide (LHW)
  - Low Wide/Medium (LWM)
- Single Band:
  - Low
  - Medium
  - Medium Ultra Wide (MW)
  - High
  - High Wide

## Low Frequency = Greater Depth (ex. 42-65 kHz)

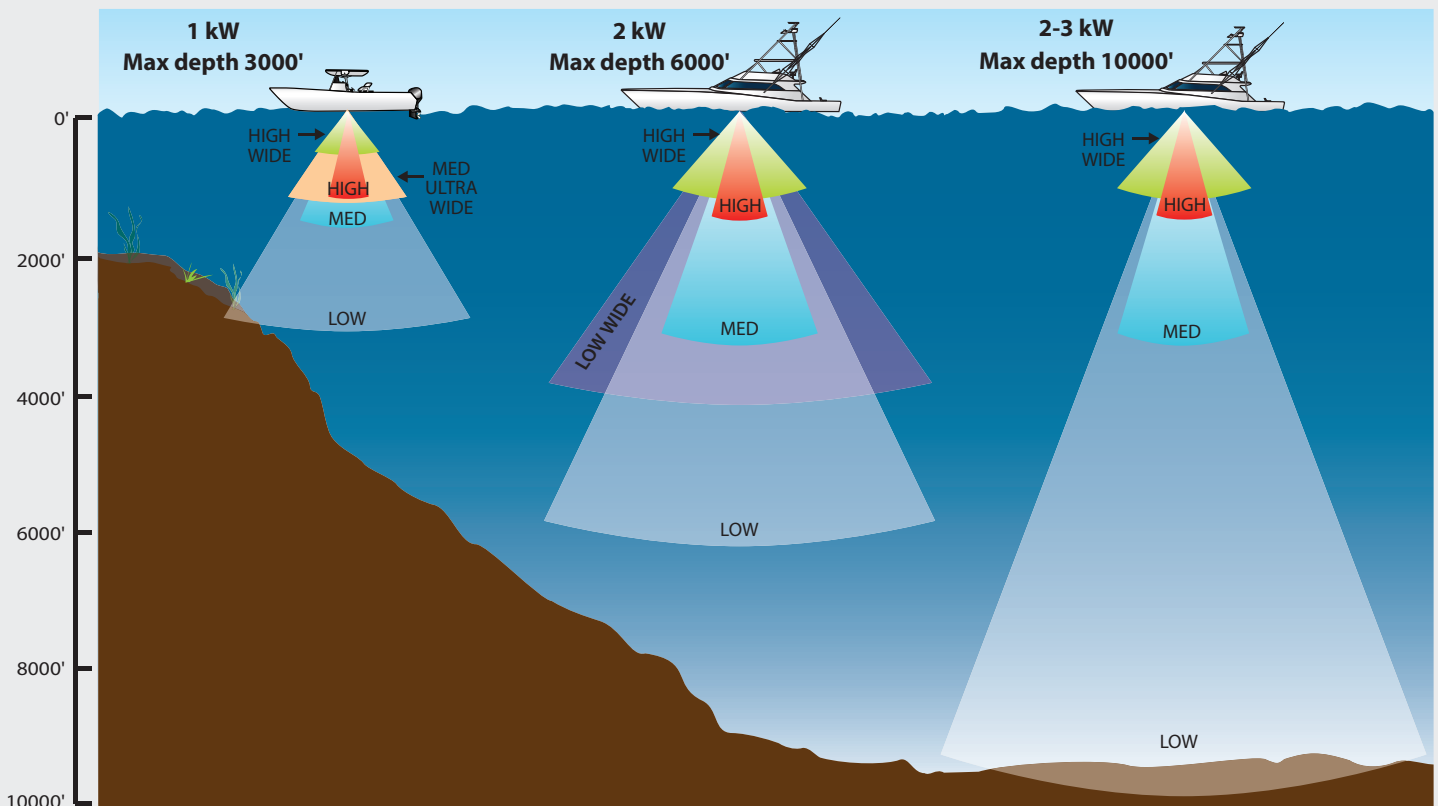
- Sound waves will not present as clear a picture of the bottom on the display, but will sound down in very deep areas where high frequency sound waves cannot reach
- Provides greater depth range, wider beamwidth, and ultimately more coverage under the boat
- Chirp signal processing technology used with AIRMAR broadband, Chirp-ready transducers provides more detail at greater depths and is less susceptible to noise
- Great for operating at high boat speeds

## High Frequency = Greater Detail (ex. 130-210 kHz)

- More sensitive to small targets and will send back detailed information which will display as crisp, high-resolution images on the echosounder screen
- Best for shallower water and popular with anglers fishing at depths less than 1500 feet

## Medium Frequency = The Best of Both Worlds (ex. 80-130 kHz)

- Provides the ability to sound deeper than the high frequency, along with better resolution than the low frequency
- Wider beam than the high frequency, achieving more coverage under the boat and greater opportunity to find fish
- Clear images at higher boat speeds

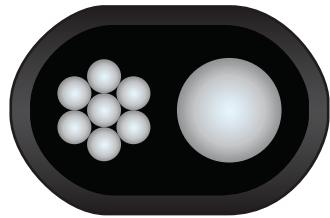


# In-Hull

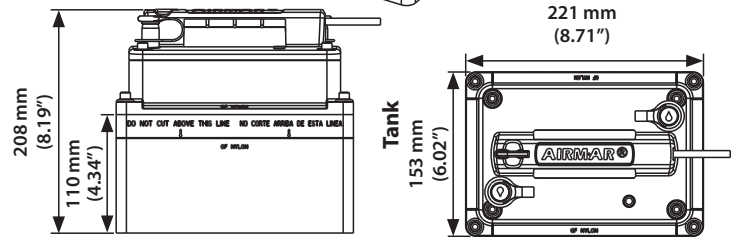
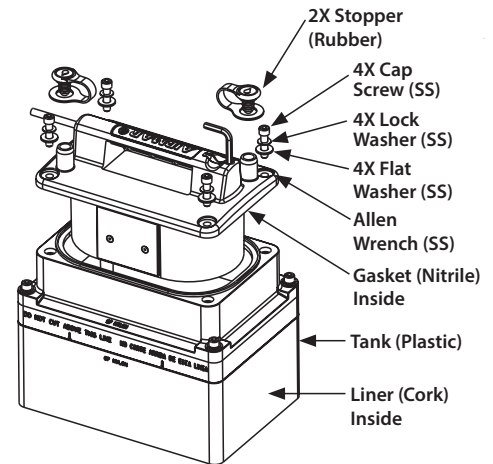
## 1 kW

### Features:

- Depth only
- Hull Type: Solid fiberglass stepped, planing or displacement hull types
- Plastic / Urethane transducer housing
- Hull deadrise: Up to 30°
- Engine type: Can be used with single or twin inboard, I/O, OB and jet drive propulsion



8-Internal  
Broadband Ceramic  
Assemblies



## M265LH

### Low & High Frequency

- Low—42 kHz to 65 kHz  
25° to 16° beamwidth  
Maximum depth 3000 ft
- High—130 kHz to 210 kHz  
10° to 6° beamwidth  
Maximum depth 1000 ft
- 103 kHz of total bandwidth from one transducer

## M265LM

### Low & Medium Frequency

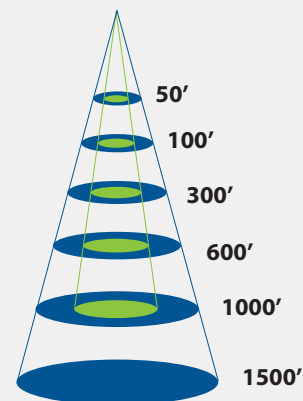
- Low—42 kHz to 65 kHz  
25° to 16° beamwidth  
Maximum depth 3000 ft
- Medium—85 kHz to 135 kHz  
16° to 11° beamwidth  
Maximum depth 1500 ft
- 73 kHz of total bandwidth from one transducer

### Bottom Coverage Relative to Frequency and Depth

Depth	Beam Coverage at Highest Frequency	
	M265LH 130 kHz-210 kHz	M265LM 85 kHz-135 kHz
50 ft	8 ft	14 ft
100 ft	18 ft	28 ft
300 ft	58 ft	84 ft
600 ft	104 ft	168 ft
1000 ft	174 ft	282 ft
1500 ft	Too Deep	422 ft

This chart compares the high and medium ceramic element inside the transducer, showing the difference in bottom coverage under the boat.

Low frequency in each of these transducer models is the same (42-65 kHz). This low frequency can range to 3,000 ft.



M265LH – High Frequency  
130 kHz-210 kHz

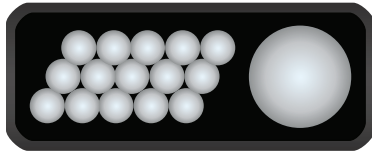
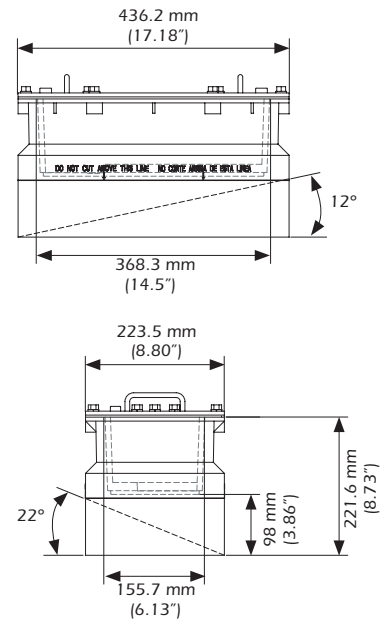
M265LM – Medium Frequency  
85 kHz-135 kHz

# In-Hull

## 2 kW

### Features:

- Depth only
- Hull Type: Solid fiberglass stepped, planing or displacement hull types
- Plastic / Urethane transducer housing
- Hull deadrise: Up to 22° short side, up to 12° long side
- Engine type: Can be used with single or twin inboard, I/O, OB and jet drive propulsion



16-Internal  
Broadband Ceramic  
Assemblies

## R111LH

### Low & High Frequency

- Low—38 kHz to 75 kHz
  - 19° to 10° port-starboard
  - 10° to 5° fore-aft beamwidth
  - Maximum depth 6000 ft
- High—130 kHz to 210 kHz
  - 8° to 4° beamwidth
  - Maximum depth 1500 ft
- 117 kHz of total bandwidth from one transducer

## R111LM

### Low & Medium Frequency

- Low—38 kHz to 75 kHz
  - 19° to 10° port-starboard
  - 10° to 5° fore-aft beamwidth
  - Maximum depth 6000 ft
- Medium—80 kHz to 130 kHz
  - 13° to 8° beamwidth
  - Maximum depth 3000 ft
- 87 kHz of total bandwidth from one transducer

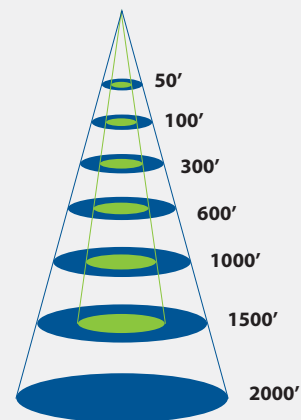
### Bottom Coverage

### Relative to Frequency and Depth

Depth	Beam Coverage at Highest Frequency	
	R111LH 130 kHz-210 kHz	R111LM 80 kHz-130 kHz
50 ft	6 ft	10 ft
100 ft	14 ft	22 ft
300 ft	42 ft	68 ft
600 ft	84 ft	136 ft
1000 ft	140 ft	228 ft
1500 ft	210 ft	342 ft
2000 ft	Too Deep	456 ft

This chart compares the high and medium ceramic elements inside the transducer, showing the difference in bottom coverage under the boat.

Low frequency in each of these transducer models is the same (38-75 kHz). This low frequency can range to 6,000 ft.



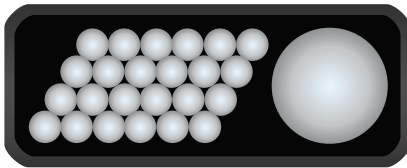
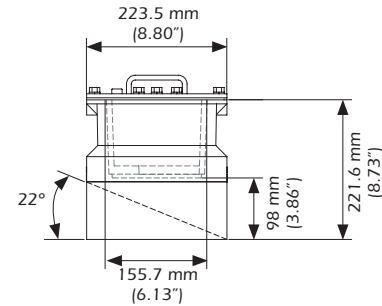
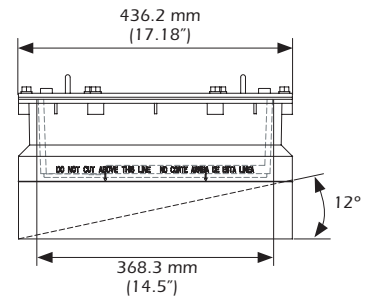
R111LH – High Frequency  
130 kHz-210 kHz  
R111LM – Medium Frequency  
80 kHz-130 kHz

# In-Hull

## 2-3 kW

### Features:

- Depth only
- Hull Type: Solid fiberglass stepped, planing or displacement hull types
- Plastic / Urethane transducer housing
- Hull deadrise: Up to 22° short side, up to 12° long side
- Engine type: Can be used with single or twin inboard, I/O, OB and jet drive propulsion



25-Internal  
Broadband Ceramic  
Assemblies

## R599LH

### Low & High Frequency

- Low—28 kHz to 60 kHz  
23° to 9° port-starboard  
11° to 5° fore-aft beamwidth  
Maximum depth 10000 ft
- High—130 kHz to 210 kHz  
8° to 4° beamwidth  
Maximum depth 1500 ft
- 112 kHz of total bandwidth from one transducer

## R599LM

### Low & Medium Frequency

- Low—28 kHz to 60 kHz  
23° to 9° port-starboard  
11° to 5° fore-aft beamwidth  
Maximum depth 10000 ft
- Medium—80 kHz to 130 kHz  
13° to 8° beamwidth  
Maximum depth 3000 ft
- 82 kHz of total bandwidth from one transducer

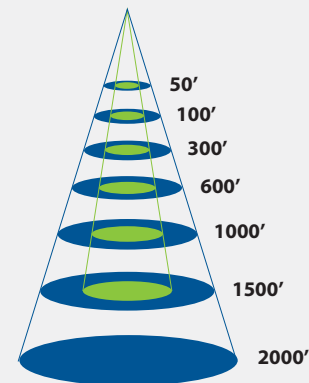
### Bottom Coverage

### Relative to Frequency and Depth

Depth	Beam Coverage at Highest Frequency	
	R599LH 130 kHz-210 kHz	R599LM 80 kHz-130 kHz
50 ft	6 ft	12 ft
100 ft	14 ft	24 ft
300 ft	42 ft	68 ft
600 ft	84 ft	136 ft
1000 ft	140 ft	228 ft
1500 ft	210 ft	342 ft
2000 ft	Too Deep	456 ft

This chart compares the high and medium ceramic elements inside the transducer, showing the difference in bottom coverage under the boat.

Low-frequency in each of these transducer models are the same (28 kHz - 60 kHz).



R599LH – High Frequency  
130 kHz-210 kHz  
R599LM – Medium Frequency  
80 kHz-130 kHz

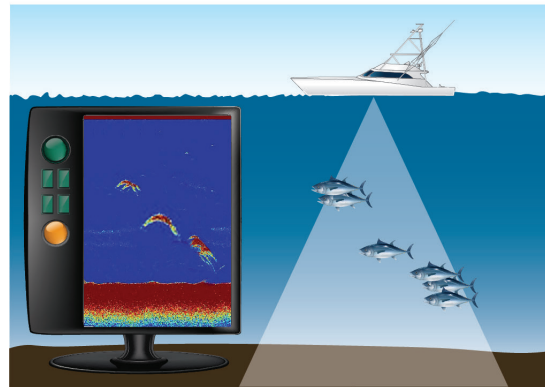
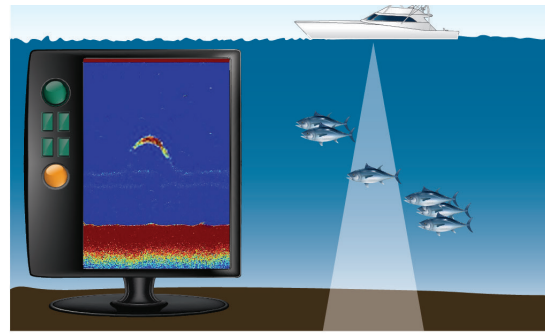
## The Chirp Advantage

Traditional sounders operate at only two discrete frequencies – typically 50 kHz and 200 kHz. This results in limited depth range, resolution, and ultimately what targets can be detected in the water column.

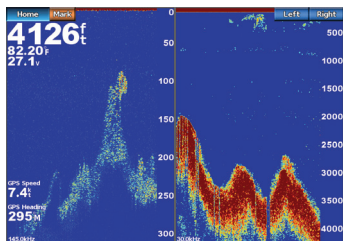
In contrast, AIRMAR’s game-changing Chirp-ready transducers provide over 70+ kHz of bandwidth. Transmitting over a wide frequency band results in a greater opportunity to detect what is in the water column. As a result, all targets detected in the entire bandwidth will be seen on the display—even those fish holding close to the bottom—ultimately improving target detection, detail, and range resolution.

Most Chirp transducers vary their beam width as they sweep through their frequency range (low, medium, and high). At the lowest frequency the beam is the widest and it narrows as the frequency increases.

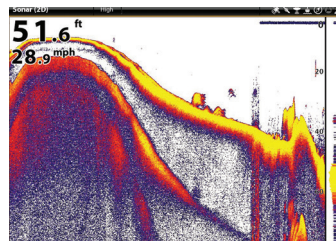
AIRMAR’s new wide beam Chirp transducers are the exception to this rule and have a fixed beam width of either 25° or 40° across the frequency band. This translates into even more coverage under the boat, revealing more fish in the water column than ever before.



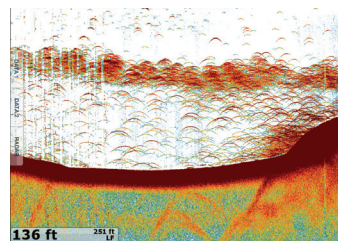
The fish must be in the beam to be represented on the display.



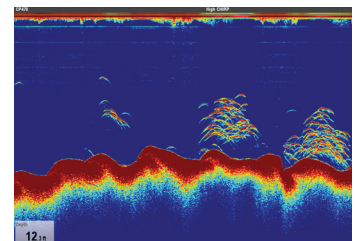
Courtesy of Garmin



Courtesy of Humminbird



Courtesy of Furuno

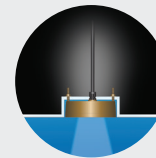
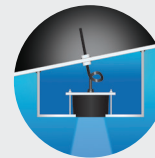
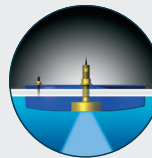


Courtesy of Raymarine

## Additional Mounting Options

Choosing your mounting option depends on the design of the hull as well as the material it’s manufactured with, the boats intended use, and the desired level of performance.

Thru-Hull    Tank Mount    Pocket Mount    Keel Mount



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