

Tilted Element™ Chirp Transducers

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

B175HW screenshot courtesy of Humminbird

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 fishing – 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 Tilted Element™ Transducers

- Ceramic elements are tilted inside the housing to compensate for the hull deadrise, ensuring the beam is aimed straight down...maximizing echo returns and eliminating the need for a fairing
- Low profile design extends only 6mm below the hull and is available in stainless steel and bronze
- Perfect for trailered or lifted boats
- For hulls under 36 feet, performance closely compares to that of a fairing type installation

Flush/tilted transducers mount through a hole drilled in any fiberglass, metal or wooden hull, with the outside of the fitting flush against the exterior hull surface. Inside the fitting, the transducer's active elements are permanently tilted to 0, 12 or 20 degree angle to compensate for hull deadrise, ensuring the sonar beam is aimed straight down.



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)
 - Medium Ultra Wide/High Wide
- 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

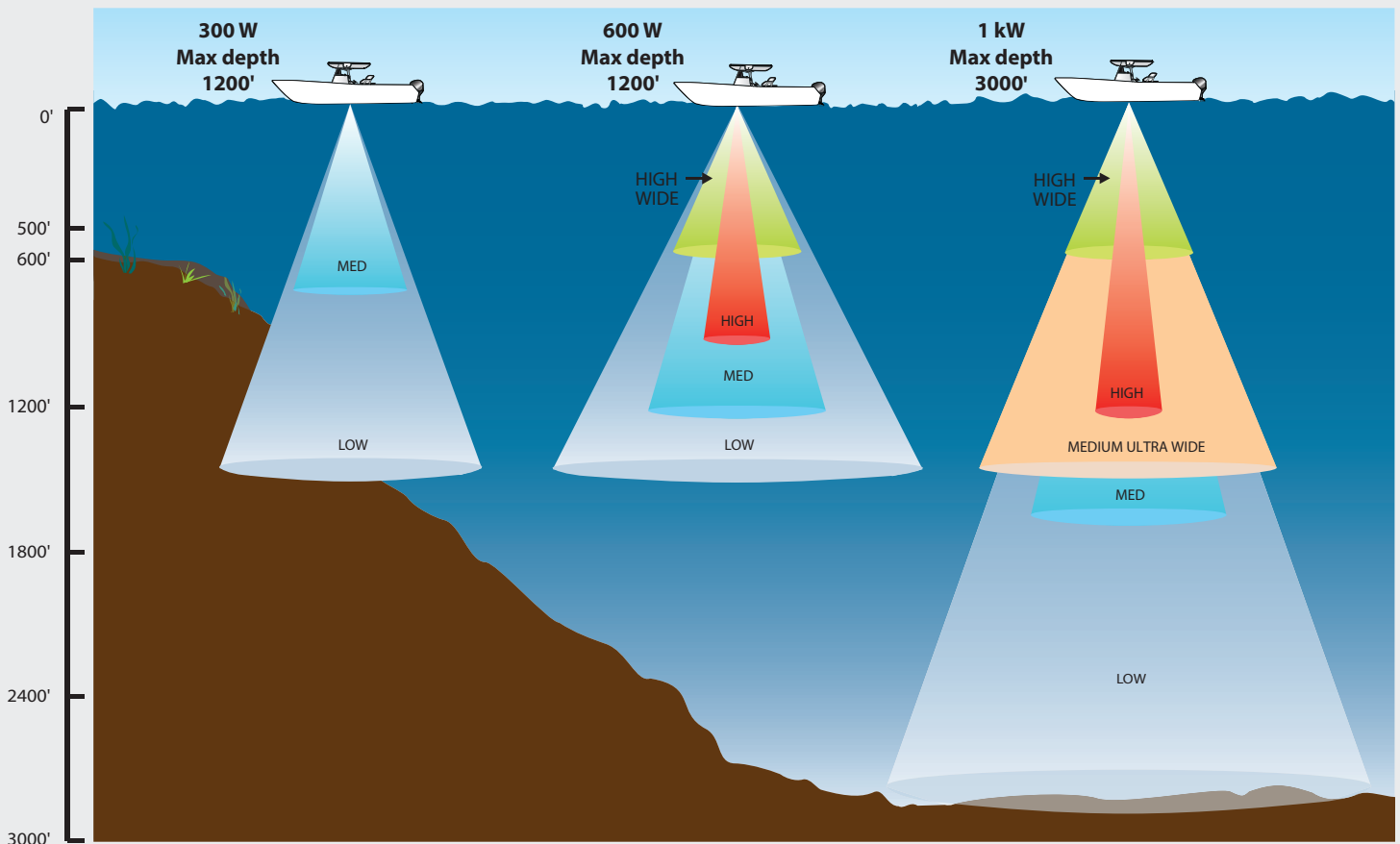
Medium Frequency = The Best of Both Worlds (ex. 80-130 kHz)

- 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

When frequency and beamwidth converge:

Airmar's High frequency wide-beam (HW) chirp and Medium frequency Ultra-wide (MW) chirp transducers provide the performance benefits of each frequency, as detailed above, with the benefit of a wider beamwidth for maximum coverage under the boat.

- Wider beamwidth delivers more coverage under the boat to locate fish in the water column.
- Wider beamwidth does not provide better bottom resolution than High or Medium frequency standard beamwidths.

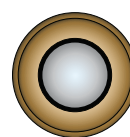
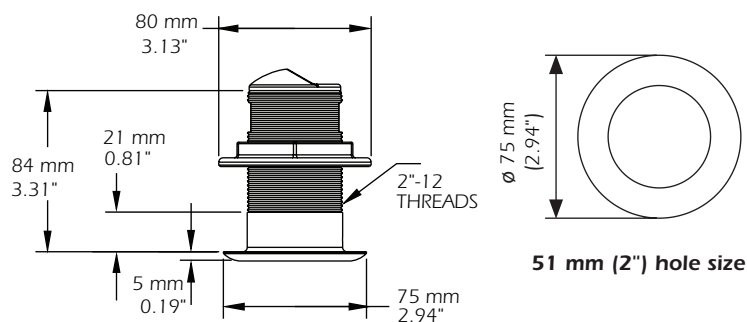


Tilted Element™ 300 W



Features:

- Depth & fast-response water-temperature sensor
- Hull Type: Wood, fiberglass. Stepped, planing or displacement type hulls
- Hull Deadrise: Up to 24°
- Fixed 20° tilted version for 16° to 24° hull deadrise
- Fixed 12° tilted version for 8° to 15° hull deadrise
- Fixed 0° tilted version for 0° to 7° hull deadrise
- Engine Type: Can be used with all propulsion types
- Recommended for boats up to 8 m (25')



1-Internal
Broadband Ceramic
Assembly

B150M

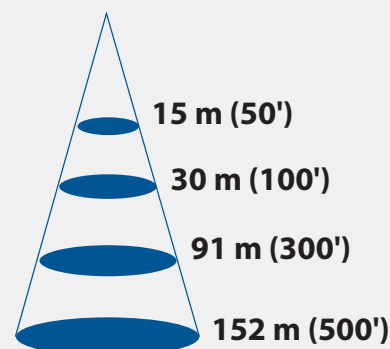
Medium Frequency

- Medium:
95 kHz to 155 kHz
26° to 17° beamwidth
Maximum depth 183 m (600')
- 60 kHz of total bandwidth from one transducer

Bottom Coverage Relative to Frequency and Depth

Depth	Bottom Coverage at Widest Beam
	B150M 95 kHz-155 kHz
15 m (50')	7 m (24')
30 m (100')	14 m (46')
91 m (300')	42 m (138')
152 m (500')	70 m (230')
304 m (1000')	Too Deep

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



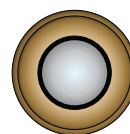
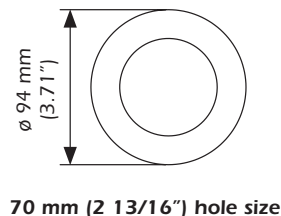
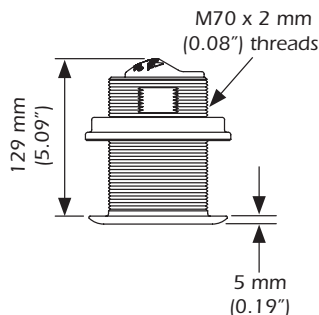
B150M – Medium Frequency
95 kHz-155 kHz

Tilted Element™ 600 W



Features:

- Depth & fast-response water-temperature sensor
- Hull Type: Wood, fiberglass. Stepped, planing or displacement type hulls
- Metals hulls require Stainless Steel models
- Hull Deadrise: Up to 24°
- Fixed 20° tilted version for 16° to 24° hull deadrise. Not available in B75L.
- Fixed 12° tilted version for 8° to 15° hull deadrise
- Fixed 0° tilted version for 0° to 7° hull deadrise
- Engine Type: Can be used with all propulsion types
- Recommended for boats up to 8 m (25')



1-Internal
Broadband Ceramic
Assembly

B75H

SS75H (Stainless Steel)

High Frequency

- High:
130 kHz to 210 kHz
15° to 9° beam
Max. depth 214 m (700')
- 80 kHz of total bandwidth from one transducer

B75M

SS75M (Stainless Steel)

Medium Frequency

- Medium:
80 kHz to 130 kHz
24° to 16° beam
Max. depth 274 m (900')
- 50 kHz of total bandwidth from one transducer

*B75L

SS75L (Stainless Steel)

Low Frequency

- Low:
40 kHz to 75 kHz
32° to 21° beam
Max. depth 366 m (1200')
- 35 kHz of total bandwidth from one transducer

* This model is 300 W. Available in 0° or 12° tilted versions only. 12° version covers 8° to 24° deadrise.

WIDE
BEAM

B75HW

High Frequency Wide-Beam

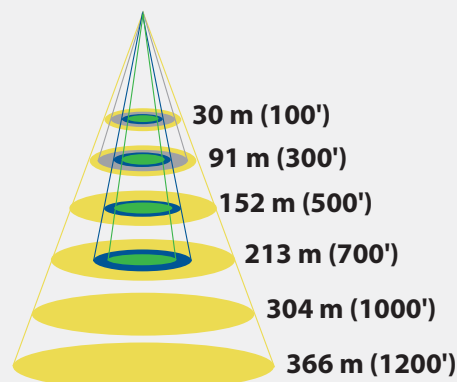
- High:
150 kHz to 250 kHz
30° beam
Max. depth 107 m (350')
- 100 kHz of total bandwidth from one transducer

Bottom Coverage Relative to Frequency and Depth

Depth	Bottom Coverage at Widest Beam			
	B75H 130 kHz- 210 kHz	B75M 80 kHz- 130 kHz	B75HW 150 kHz- 250 kHz	B75L 40 kHz- 75 kHz
15 m (50')	7 m (14')	7 m (22')	8 m (26')	9 m (28')
30 m (100')	8 m (26')	13 m (42')	16 m (54')	18 m (58')
91 m (300')	24 m (78')	39 m (128')	49 m (160')	52 m (172')
152 m (500')	40 m (132')	65 m (212')	Too Deep	87 m (286')
304 m (1000')	Too Deep	Too Deep	Too Deep	175 m (574')
457 m (1500')	Too Deep	Too Deep	Too Deep	Too Deep

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

Models are also available in stainless steel.



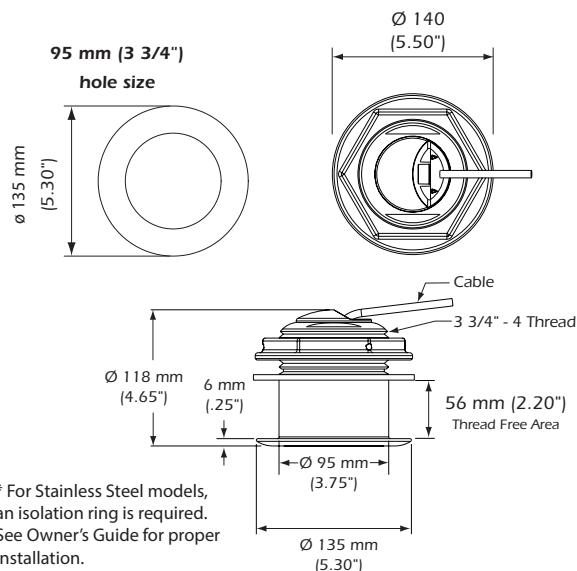
- B75L – Low Frequency
40 kHz-75 kHz
- B75HW – High Frequency Wide-Beam
150 kHz-250 kHz
- B75M – Medium Frequency
80 kHz-130 kHz
- B75H – High Frequency
130 kHz-210 kHz

Tilted Element™ 1 kW

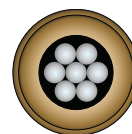
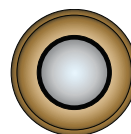


Features:

- Depth & fast-response water-temperature sensor
- Hull Type: Wood, fiberglass. Stepped, planing or displacement type hulls
- Metals hulls require Stainless Steel models
- Hull Deadrise: Up to 24°
- Fixed 20° tilted version for 16° to 24° hull deadrise
- Fixed 12° tilted version for 8° to 15° hull deadrise
- Fixed 0° tilted version for 0° to 7° hull deadrise
- Engine Type: Can be used with all propulsion types
- Recommended for boats up to 11 m (36')



1-Internal
Broadband Ceramic
Assembly
B175M/H/HW



7-Internal
Broadband Ceramic
Assemblies
B175L

B175H

SS175H (Stainless Steel)

High Frequency

- High:
130 kHz to 210 kHz
10° to 6° beam
Max. depth 305 m (1000')
- 80 kHz of total bandwidth from one transducer

B175M

SS175M (Stainless Steel)

Medium Frequency

- Medium:
85 kHz to 135 kHz
16° to 11° beam
Max. depth 457 m (1500')
- 50 kHz of total bandwidth from one transducer

ULTRA
WIDE

B175MW

SS175MW (Stainless Steel)

Medium Frequency Ultra-Wide

- Medium:
60 kHz to 100 kHz
57° to 73° beam p/s
16° average f/a
Max. depth 396 m (1300')
- 40 kHz of total bandwidth from one transducer

B175L

SS175L (Stainless Steel)

Low Frequency

- Low:
40 kHz to 60 kHz
32° to 21° beam
Max. depth 762 m (2500')
- 20 kHz of total bandwidth from one transducer

WIDE
BEAM

B175HW

SS175HW (Stainless Steel)

High Frequency Wide-Beam

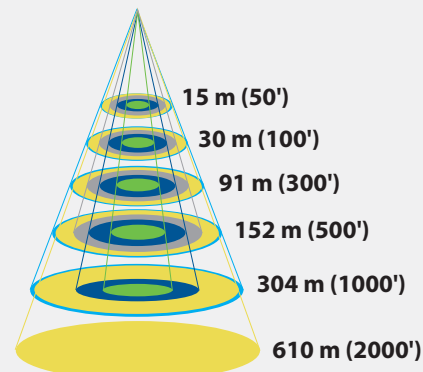
- High:
150 kHz to 250 kHz
25° constant beam
Max. depth 152 m (500')
- 100 kHz of total bandwidth from one transducer

Bottom Coverage Relative to Frequency and Depth

Depth	Bottom Coverage at Widest Beam				
	B175H 130 kHz- 210 kHz	B175M 85 kHz- 135 kHz	B175MW 60 kHz-100 kHz fore/aft X port/starboard	B175HW 150 kHz- 250 kHz	B175L 40 kHz- 60 kHz
15 m (50')	3 m (10')	4 m (14')	4 m (14') X 23 m (74')	7 m (22')	9 m (28')
30 m (100')	6 m (20')	9 m (28')	9 m (28') X 45 m (148')	13 m (44')	18 m (58')
91 m (300')	18 m (58')	26 m (84')	26 m (84') X 135 m (444')	41 m (134')	51 m (166')
152 m (500')	27 m (88')	43 m (140')	42 m (140') X 226 m (740')	68 m (222')	87 m (286')
304 m (1000')	59 m (192')	86 m (282')	86 m (282') X 451 m (1480')	Too Deep	169 m (554')
610 m (2000')	Too Deep	Too Deep	Too Deep	Too Deep	338 m (1110')

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

Models are also available in stainless steel.



- B175L – Low Frequency
40 kHz-60 kHz
- B175HW – High Frequency Wide-Beam
150 kHz-250 kHz
- B175MW – Medium Frequency Ultra-Wide
60 kHz-100 kHz
- B175M – Medium Frequency
85 kHz-135 kHz
- B175H – High Frequency
130 kHz-210 kHz

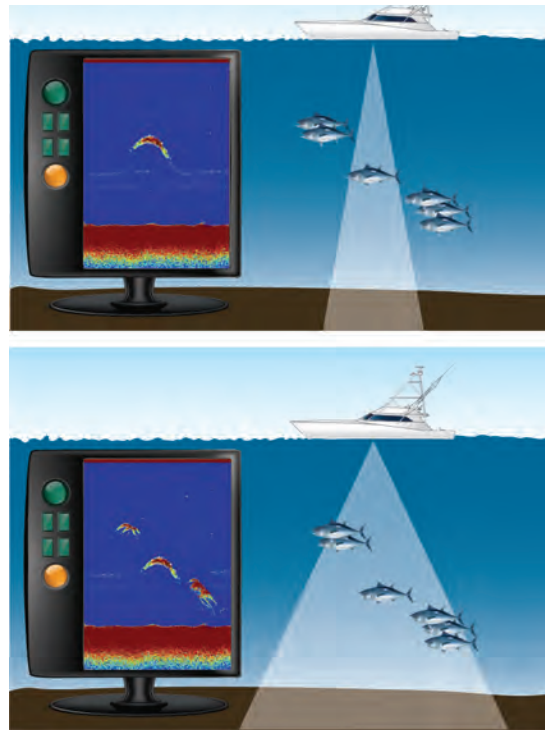
The Chirp Advantage

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.

Additional Mounting Options

Thru-Hull



In-Hull

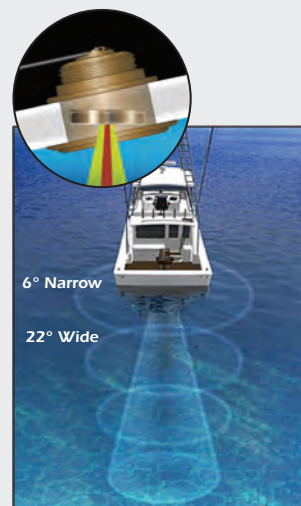


Transom Mount

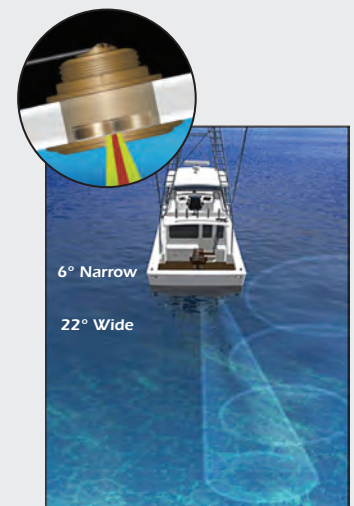


Choosing your mounting option depends on the design of the hull as well as the material it's manufactured with, the boats intended use, and the desired level of performance.

Proper Installation with Tilt Compensation



Improper Installation without Tilt Compensation



In a proper installation the ceramic element is tilted inside the housing, which compensates for your boat's deadrise. This aims the beam straight toward the bottom, resulting in stronger echo returns and more accurate depth readings.



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