

TC2178

Dual-Frequency Transducer

TC2178

Model TC2178 is an optimized and hydrodynamic 33kHz and 200kHz dual-frequency transducer ideal for navigation and hydrographic echosounder systems.

The transducer has excellent piezoceramic elements which will ensure the highest reliability and quality in echosounding.



TECHNICAL SPECIFICATIONS

Resonant frequency:	33 kHz ±2kHz
	200kHz ±5kHz
Transmitting sensitivity:	168dB ±3dB at 33kHz (re 1µPa/V at 1m)
	174dB ±3dB at 200kHz (re 1µPa/V at 1m)
Receiving sensitivity:	-177dB ±3dB at 33kHz (re 1V/µPa)
	-187dB ±3dB at 200kHz (re 1V/µPa)
Impedance:	80ohm ±24ohm at 33kHz and 200kHz
Beam width:	22°±2° at 33kHz
	9.5°±1° at 200kHz
Beam shape:	Conical
Max input power:	1000W at 33kHz (at 1% duty cycle)
	450W at 200kHz (at 1% duty cycle)
Operating depth:	30m
Survival depth:	50m
Operating temperature range:	-2°C to +35°C
Storage temperature range:	-30°C to +50°C
Weight in air, with cable:	9.7kg
Housing:	PVC
Cable (length and type):	18m FALMAT Type FM088095-7, 4x1 (2 x twisted pair) PUR Jacket
	WATER BLOCK, Kevlar Braid 800lbs breaking strength (O.D. 11mm) - Terminated with E20 Connector (Connector: GT272254-32050, Teledyne P/N 1012320-DK)

FEATURES

- Hydrodynamic shape
- Narrow beams
- High acoustical performance
- Compact design
- Electrical compatible with most 33kHz and 200kHz echosounders

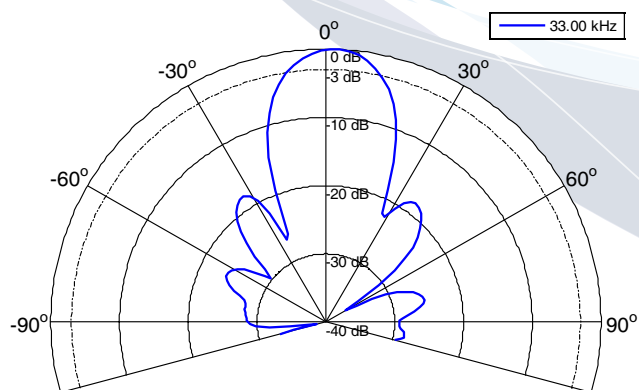


Transducer TC2178

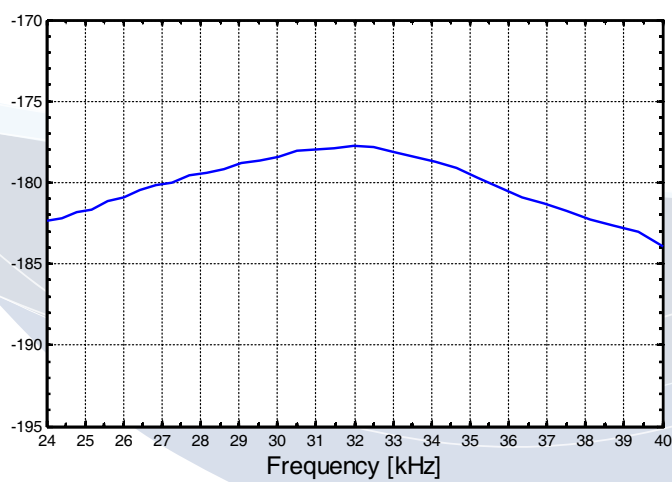
Dual-Frequency Transducer

Typical graphs 33kHz

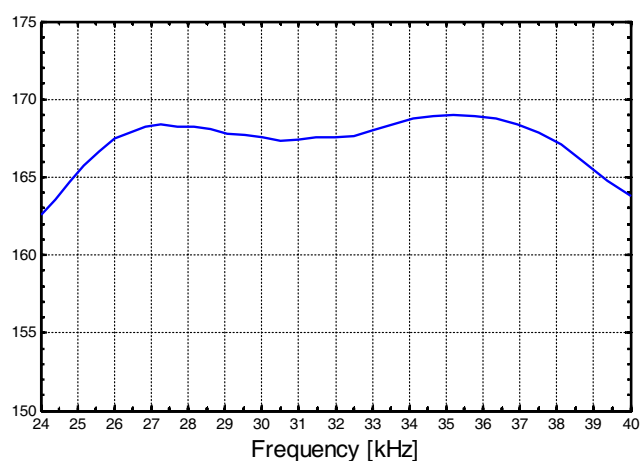
Horizontal Directivity Pattern



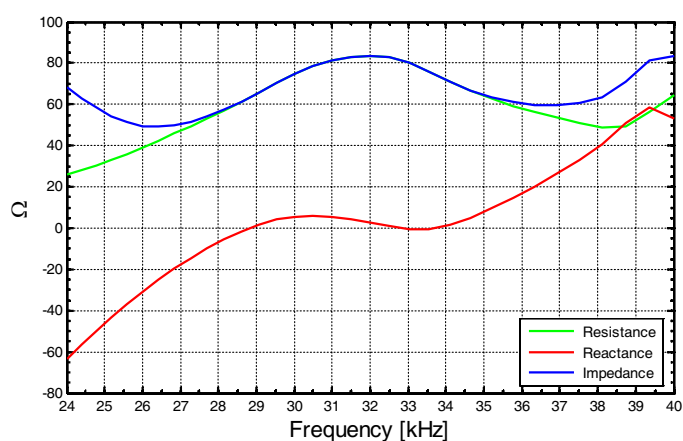
Receiving Sensitivity [dB re 1V/ μ Pa @ 1m]



Transmitting Sensitivity [dB re 1 μ Pa/V @ 1m]



Impedance



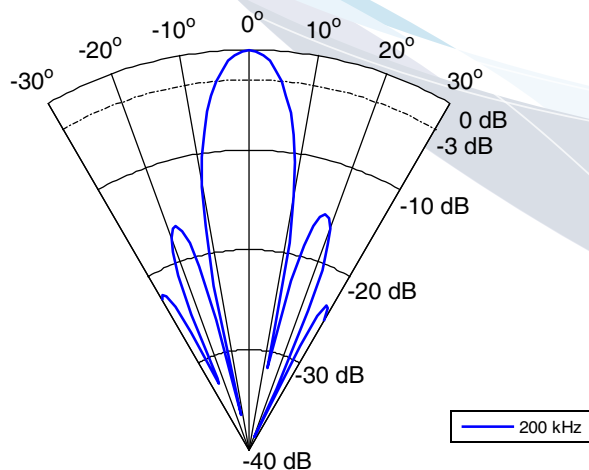
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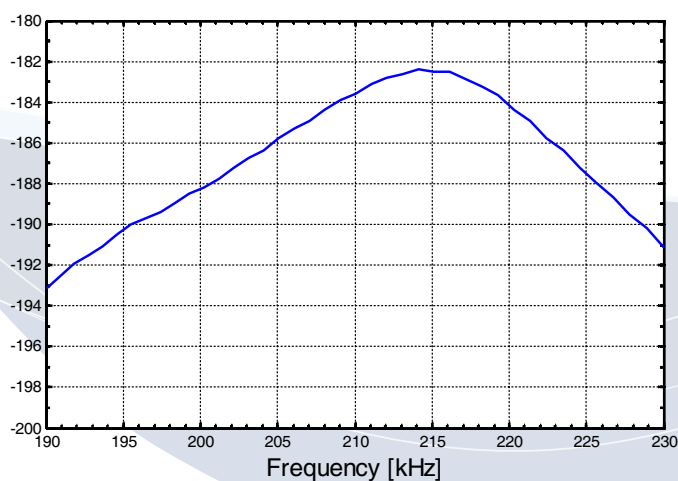
Dual-Frequency Transducer

Typical graphs 200kHz

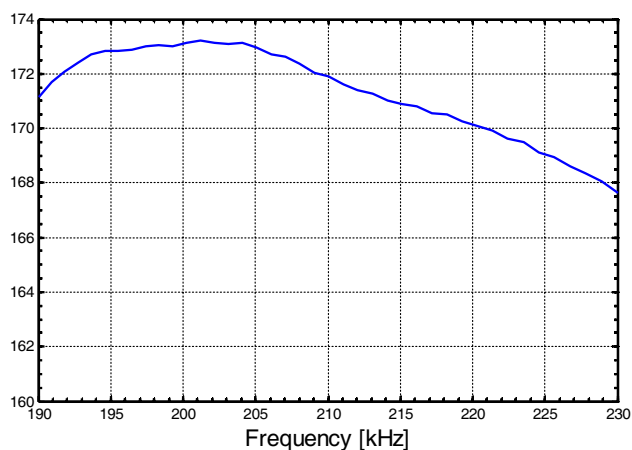
Horizontal Directivity Pattern



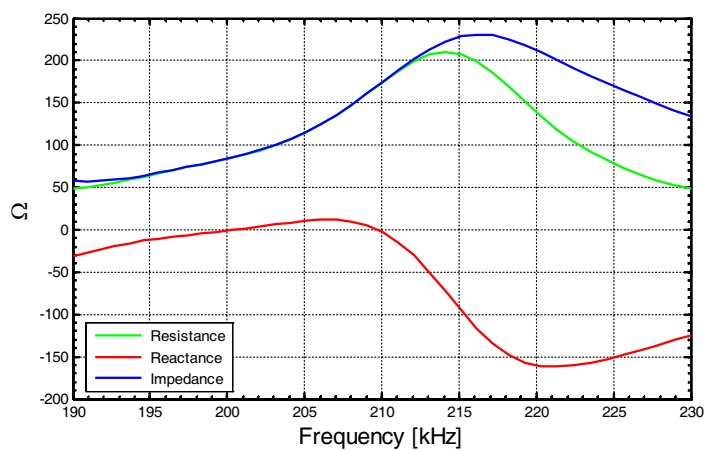
Receiving Sensitivity [dB re 1V/μPa @ 1m]



Transmitting Sensitivity [dB re 1μPa/V @ 1m]



Impedance



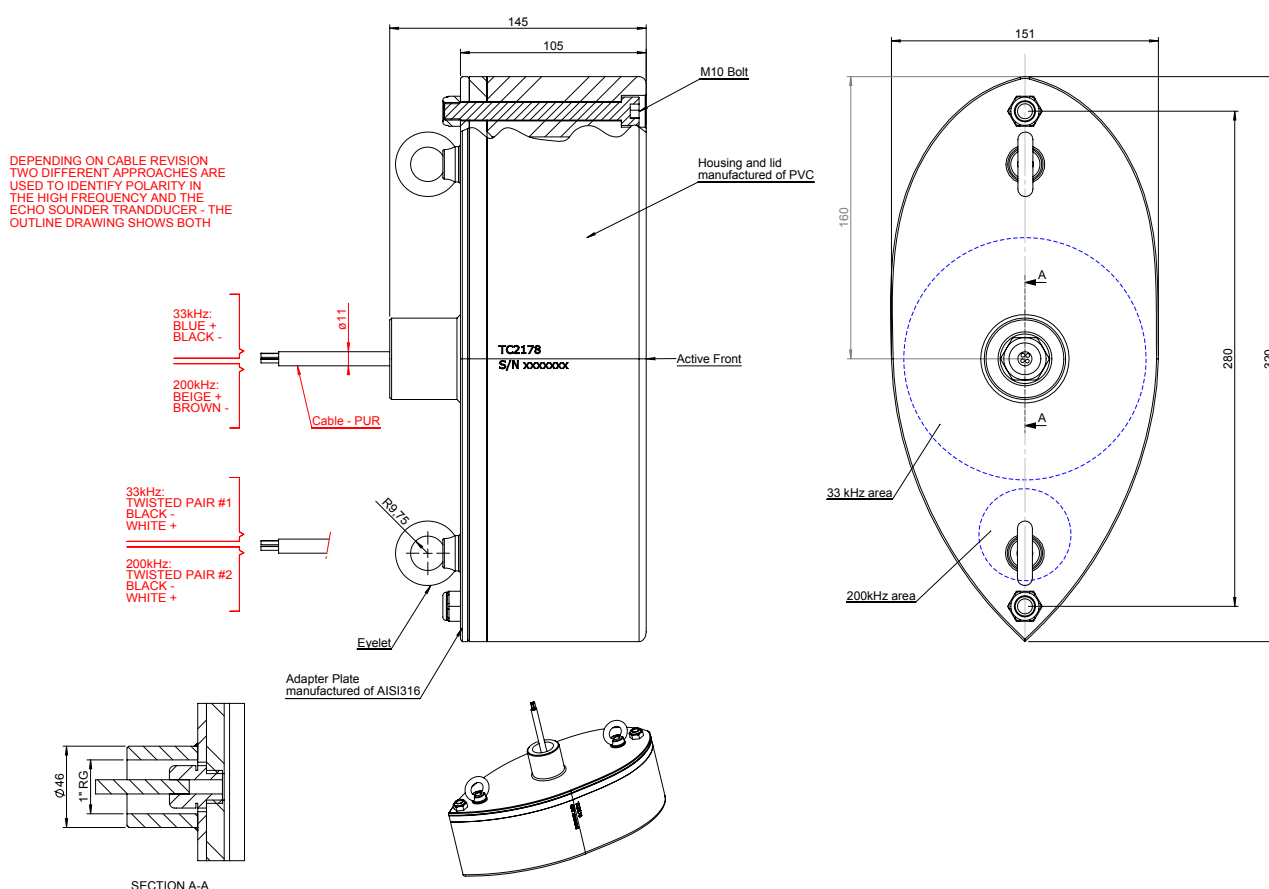
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Outline Dimensions



Thread WRG 1": Withworth Parallel Pipe Thread. Nominal OD 33.25mm, thread pitch 11 per inch. (DS/ISO 7/1 228/1 R DIN 259 -WRG)



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www.teledynemarine.com/reson

Tel. +45 4738 0022 (Europe) • Tel: +1 805 964 6260 (USA)

Email: reson@teledyne.com