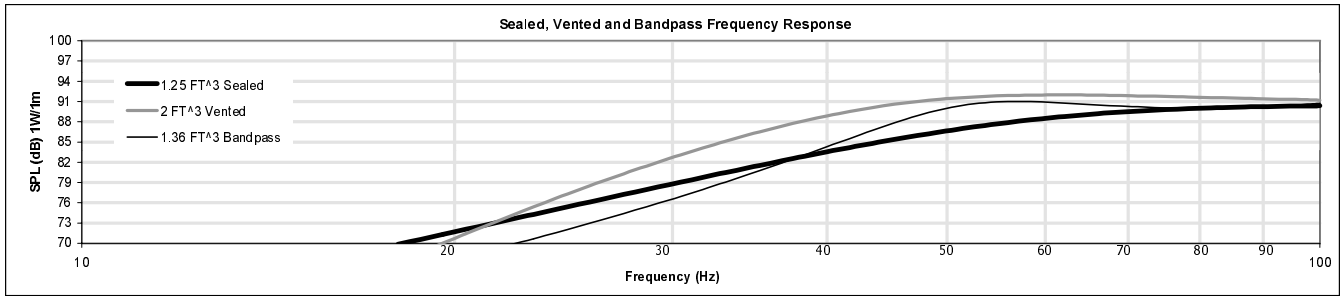




# 12RD Technical Data Report

## Coustic 12" Dual 4 Ohm Subwoofer



### Sealed Enclosures

	1.25 Ft <sup>3</sup> (21.2 l)	1.00 Ft <sup>3</sup> (28.3 l)	1.25 Ft <sup>3</sup> (35.4 l)	1.50 Ft <sup>3</sup> (42.5 l)	1.75 Ft <sup>3</sup> (49.6 l)
Enclosure Volume	.75 Ft <sup>3</sup>	1.00 Ft <sup>3</sup>	1.25 Ft <sup>3</sup>	1.50 Ft <sup>3</sup>	1.75 Ft <sup>3</sup>
F3	61 Hz	56 Hz	53 Hz	51 Hz	50 Hz
Ripple	.00dB	.00dB	.00dB	.00dB	.00dB
Qtc	.95	.85	.78	.73	.70
Net Volume	.69 Ft <sup>3</sup> (19.5 l)	.94 Ft <sup>3</sup> (26.6 l)	1.19 Ft <sup>3</sup> (33.7 l)	1.44 Ft <sup>3</sup> (40.8 l)	1.69 Ft <sup>3</sup> (47.9 l)
Driver Volume	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)
Excursion Limited SPL	115dB	114dB	114dB	113dB	113dB
Excursion Limited Power	250 Watts	250 Watts	250 Watts	250 Watts	250 Watts

### Vented Enclosures

	1.50 Ft <sup>3</sup> (42.5 l)	1.75 Ft <sup>3</sup> (49.6 l)	2.00 Ft <sup>3</sup> (56.6 l)	2.25 Ft <sup>3</sup> (63.7 l)	2.50 Ft <sup>3</sup> (70.8 l)
Enclosure Volume	1.50 Ft <sup>3</sup>	1.75 Ft <sup>3</sup>	2.00 Ft <sup>3</sup>	2.25 Ft <sup>3</sup>	2.50 Ft <sup>3</sup>
Vent Dimensions	4"x12"	4"x11"	4"x10.25"	4"x9.75"	4"x9.25"
F3	44 Hz	40 Hz	38 Hz	34 Hz	32 Hz
Tuning Frequency	41 Hz	39 Hz	37 Hz	36 Hz	34 Hz
Ripple	.82dB	.82dB	.77dB	.67dB	.57dB
Net Volume	1.35 Ft <sup>3</sup> (38.2 l)	1.61 Ft <sup>3</sup> (45.5 l)	1.86 Ft <sup>3</sup> (52.7 l)	2.12 Ft <sup>3</sup> (59.9 l)	2.37 Ft <sup>3</sup> (67.1 l)
Driver Volume	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)
Vent Volume	.09 Ft <sup>3</sup> (2.6 l)	.08 Ft <sup>3</sup> (2.4 l)	.08 Ft <sup>3</sup> (2.2 l)	.07 Ft <sup>3</sup> (2.1 l)	.07 Ft <sup>3</sup> (2.0 l)
Excursion Limited SPL	116dB	116dB	115dB	115dB	115dB
Excursion Limited Power	250 Watts	250 Watts	250 Watts	250 Watts	250 Watts

### Single Reflex Bandpass Enclosures

s=0.5

	1.12 Ft <sup>3</sup> (31.7 l)	1.23 Ft <sup>3</sup> (34.8 l)	1.36 Ft <sup>3</sup> (38.5 l)	1.53 Ft <sup>3</sup> (43.3 l)	1.77 Ft <sup>3</sup> (50.1 l)
Enclosure Volume	1.12 Ft <sup>3</sup>	1.23 Ft <sup>3</sup>	1.36 Ft <sup>3</sup>	1.53 Ft <sup>3</sup>	1.77 Ft <sup>3</sup>
Bandpass	52 - 154	47 - 149	42 - 144	39 - 139	34 - 133
Bandpass Gain	2.0dB	1.0dB	-.2dB	-1.4dB	-2.9dB
Vent Dimensions	(2)4"x12.25"	(2)4"x14.75"	(2)4"x17.5"	(2)4"x21.25"	(2)4"x26"
Tuning Frequency	91 Hz	85 Hz	80 Hz	74 Hz	67 Hz
Ripple	.93dB	.96dB	.99dB	1.01dB	1.04dB
Sealed Volume	.38 Ft <sup>3</sup> (10.9 l)	.45 Ft <sup>3</sup> (12.6 l)	.53 Ft <sup>3</sup> (15.0 l)	.64 Ft <sup>3</sup> (18.2 l)	.80 Ft <sup>3</sup> (22.8 l)
Vented Volume	.49 Ft <sup>3</sup> (13.9 l)	.49 Ft <sup>3</sup> (13.9 l)	.49 Ft <sup>3</sup> (13.9 l)	.49 Ft <sup>3</sup> (13.9 l)	.49 Ft <sup>3</sup> (13.9 l)
Driver Volume	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)
Vent Volume	.19 Ft <sup>3</sup> (5.3 l)	.23 Ft <sup>3</sup> (6.5 l)	.28 Ft <sup>3</sup> (7.8 l)	.34 Ft <sup>3</sup> (9.5 l)	.41 Ft <sup>3</sup> (11.7 l)
Excursion Limited SPL	116dB	115dB	114dB	113dB	112dB
Excursion Limited Power	250 Watts	250 Watts	250 Watts	250 Watts	250 Watts

### Single Reflex Bandpass Enclosures

s=0.6

	1.59 Ft <sup>3</sup> (45.0 l)	1.75 Ft <sup>3</sup> (49.6 l)	1.96 Ft <sup>3</sup> (55.5 l)	2.24 Ft <sup>3</sup> (63.4 l)	2.63 Ft <sup>3</sup> (74.5 l)
Enclosure Volume	1.59 Ft <sup>3</sup>	1.75 Ft <sup>3</sup>	1.96 Ft <sup>3</sup>	2.24 Ft <sup>3</sup>	2.63 Ft <sup>3</sup>
Bandpass	53 - 131	48 - 126	42 - 121	37 - 116	32 - 110
Bandpass Gain	3.3dB	2.2dB	1.1dB	-.2dB	-1.7dB
Vent Dimensions	(3)4"x15.25"	(3)4"x18.25"	(3)4"x22"	(3)4"x27"	(3)4"x33.5"
Tuning Frequency	84 Hz	78 Hz	73 Hz	67 Hz	61 Hz
Ripple	.27dB	.28dB	.30dB	.31dB	.32dB
Sealed Volume	.47 Ft <sup>3</sup> (13.3 l)	.55 Ft <sup>3</sup> (15.6 l)	.66 Ft <sup>3</sup> (18.8 l)	.82 Ft <sup>3</sup> (23.3 l)	1.06 Ft <sup>3</sup> (29.9 l)
Vented Volume	.71 Ft <sup>3</sup> (20.0 l)	.71 Ft <sup>3</sup> (20.0 l)	.71 Ft <sup>3</sup> (20.0 l)	.71 Ft <sup>3</sup> (20.0 l)	.71 Ft <sup>3</sup> (20.0 l)
Driver Volume	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)	.06 Ft <sup>3</sup> (1.7 l)
Vent Volume	.36 Ft <sup>3</sup> (10.1 l)	.43 Ft <sup>3</sup> (12.2 l)	.52 Ft <sup>3</sup> (14.8 l)	.65 Ft <sup>3</sup> (18.3 l)	.81 Ft <sup>3</sup> (22.8 l)
Excursion Limited SPL	117dB	116dB	115dB	113dB	112dB
Excursion Limited Power	250 Watts	250 Watts	250 Watts	250 Watts	250 Watts

### Limited Warranty

Coustic subwoofers purchased from an authorized dealer are guaranteed against defects in parts and workmanship for a period of one (1) year from the date of purchase. (Two years if installed by an authorized Coustic dealer). Speakers found defective during that period will be repaired by Coustic without charge for parts

This warranty is void if it is determined that unauthorized parties have attempted repairs or alterations of any nature. This warranty does not extend to cabinets or certain that all associated equipment is operating properly.

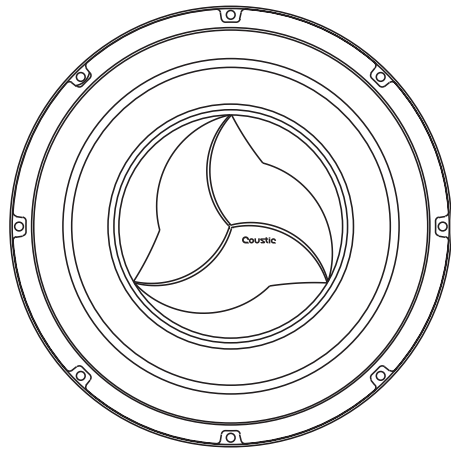
If a defect is present, your authorized Coustic dealer may be able to effect repairs. If not, you are responsible for providing transportation to the factory. Your Coustic dealer can recommend the safest method of transportation. Proof of purchase is required when requesting service, so please retain your sales slip.

Specifications subject to change without notice.



# 12RD Technical Data Report

## Cooustic 12" Dual 4 Ohm Subwoofer



### Features

- 2" Dual 4-ohm voice coil
- Kapton voice coil former
- Polylaminate cone
- Rubber magnet cover
- High energy strontium ferrite magnet
- Santoprene rubber surround
- Flat Progressive Spider
- Extended Vented Pole Piece

### Specifications\*

Free Air Resonance	Fs	33.3 Hz	
Volume Acoustic Suspension	Vas	2.49 Ft <sup>3</sup>	(70.5 l)
Total Q	Qts	.44	
Electrical Q	Qes	.46	
Mechanical Q	Qms	12.22	
DC Resistance	Re	1.69 Ohm	
Linear Excursion (One Way)	Xmax	.36"	(9.2 mm)
Effective Piston Diameter	D	10.250"	(.2604 m)
RMS Power Handling	RMS	250 Watts	
Total Power Handling	Total	500 Watts	
Sensitivity 1W/1m	SPLo	90.1 dB	
Reference Efficiency	No	0.54%	
Frequency Response		33 - 150Hz	
Voice Coil Inductance	Le	1.1 mH	
Gap Height		.312"	(7.9 mm)
Voice Coil Height		.945"	(24.0 mm)
Voice Coil Diameter		2.0"	(50.8 mm)
Magnet Weight		50 oz	(1417 g)
Motor Force	BL	9.93 Tm	
Compliance	Cms	.177 mm/N	
Total Moving Mass	Mms	128.9 g	
Moving Mass of Driver	Mmd	121.9 g	
Suspension Losses	Rms	2.21	
Effective Surface Area	Sd	82.5 in <sup>2</sup>	(.0532m <sup>2</sup> )
Mounting Diameter		11 "	(279.4 mm)
Overall Diameter		12 1/4 "	(311.2 mm)
Mounting Depth		5 7/8 "	(149.2 mm)
Overall Depth		6 5/16"	(160.3 mm)
Speaker Displacement (Inside Box)		162in <sup>2</sup>	(2.7 l)
Speaker Displacement (Outside Box)		103in <sup>2</sup>	(1.7 l)

\* Dual Voice Coil models measured with coils in parallel.