

TORO Subwoofers

General Features

- * Heavy Duty Diamond Polished Cast Aluminum Basket
- * High Energy Double Stacked 200oz. Strontium Magnet Structure
- * Dual Impedance Black Anodized Former With EISV Voice Coil
- * Poly Cotton Spider With Woven Round Tinsel Leads
- * Semi Pressed Paper Cone
- * Custom Tooled Tall/Narrow Foam Edge
- * V-Shape Weaved Glassfiber Center Dustcap
- * Custom Tooled Rubber Gasket
- * Custom Tooled Bottom Plate To Insure Noise Free Ventilation

Specifications

CONFIGURATION		TORO 104			TORO 124			TORO 122			TORO 154		
Voice Coil		Dual 4 Ohm			Dual 4 Ohm			Dual 2 Ohm			Dual 4 Ohm		
FS	Hz	57.18			48.53			49.88			40.84		
Qms		3.821			4.467			3.512			4.586		
Vas	liters	8.993			19.42			18.16			51.34		
Cms	um/N	48			54.1			50.6			49.4		
Mms	g	161.3			199			201.2			307.4		
Rms	Kg/s	15.18			13.57			17.95			17.2		
Xmax	mm	12.6			12.6			9.5			12.6		
Xmech	mm	18.9			18.9			14.25			18.9		
Dia.	mm	215			253			253			330		
Sd	sq.m	0.0363			0.0503			0.0503			0.0855		
Vd	liters	0.458			0.633			0.477			1.078		
ELECTRICAL		Individual	Parallel	Series	Individual	Parallel	Series	Individual	Parallel	Series	Individual	Parallel	Series
Qes		1.638	0.654	0.729	1.634	0.814	0.849	1.153	0.574	0.666	2.176	1.046	1.15
Re	ohms	3.6	1.8	7.2	3.6	1.8	7.2	1.8	0.9	3.6	3.6	1.8	7.3
Le	mH	0.682	0.688	3.147	0.64	0.637	2.993	0.321	0.324	1.395	0.63	0.646	3.027
BL	Tm	11.28	12.91	24.26	11.56	11.74	22.91	9.923	10.3	18.47	11.42	11.71	22.41
Pe	Watts	600	1200	1200	600	1200	1200	600	1200	1200	600	1200	1200
ELECTROMECHANICAL		Individual	Parallel	Series	Individual	Parallel	Series	Individual	Parallel	Series	Individual	Parallel	Series
Qts		1.147	0.494	0.568	1.196	0.671	0.717	0.868	0.474	0.576	1.476	0.824	0.929
no	%	0.099	0.229	0.212	0.131	0.251	0.243	0.188	0.367	0.326	0.155	0.319	0.291
1-W-SPL	dB	82.1	85.75	85.4	83.32	86.14	86.01	84.9	87.79	87.28	84.05	87.18	86.79
2.8V SPL	dB	86.57	92.22	85.87	86.79	92.62	86.46	91.37	97.28	90.75	87.52	93.66	87.18

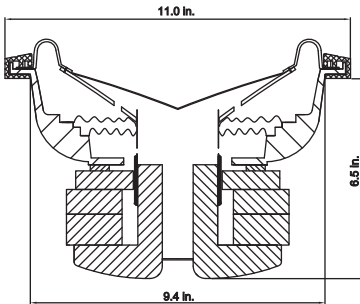
2400
PEAK WATTS



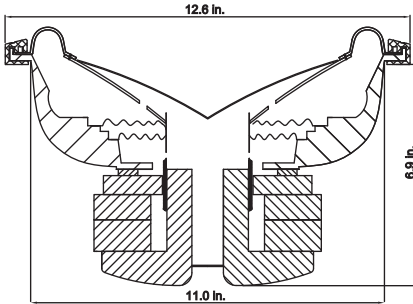
RoHS E8



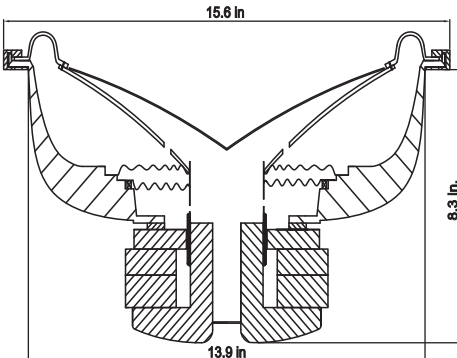
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TORO 10



TORO 12

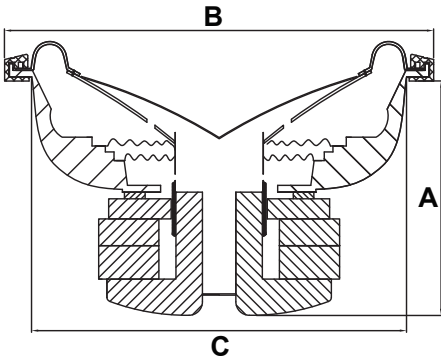


TORO 15

TORO

For More Customized Box Volume Specifications
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	TORO 10	TORO 12	TORO 15
Mounting Depth (A)	6.5 in.	6.9 in.	8.3 in.
Mounting Diamter (B)	11.0 in.	12.6 in.	15.6 in.
Mounting cut diameter (C)	9.4 in.	11.0 in	13.9 in
Net weight (Lb)	25.1	26.2	27.0
Displa cment (ft3)	0.154	0.187	0.276



Recommended Enclosures:

	TORO 104		TORO 124		TORO 122		TORO 154	
Single SEALED	Small	Large	Small	Large	Small	Large	Small	Large
Volume (cub. ft)	N/A	N/A	1.2	2.5	1.2	N/A	1.95	3.5
Internal Volume (W x H x D)			14x14x11.25	20x16x14	14x13x11.25		17x17x11.75	25x17x14
F3 Hz			56	53	64		45	41
Qtc			0.84	0.711	0.707		1.1	0.94
Single PORTED	Small	Large	Small	Large	Small	Large	Small	Large
Volume (cub ft.)	0.9	1.25	1.5	2.2	1.5	2.25	3.5	4.75
Internal Volume (W x H x D)	12X13X10	20x14x8.00	14x14x12.75	20x14x13.5	14x14x12.75	20x14x13.75	25x18x14	28x18x17.5
Fb Hz	43	36	43	36	43	36	43	36
Cabin Gain dB/Hz	5@43	6@36	6@55	8@36	6@43	8@38	9@48	9@36
Port round (D x L)	3x11.5	3x9.75	4x11.75	4x10	4x11.75	4x10	6x8.25	6x7.25
Port Area sq. in.	11.75	11.75	12.56	12.56	12.56	12.56	28.27	28.75
Dual Sub Box Ported								
Volume (cub ft.)	2.5		3.5		3		7.5	
Internal Volume (W x H x D)	24x13x13.75		28x14x15.5		28x14x13.25		35x20x18.5	
Port (1) Sq.area in.	19.63		28.27		28.27		78.5	
Port Length	10		11.5		14.25		9.75	
Fb Hz	40		38		38		41	

The port may have to be placed along the back wall facing the side. Place a brace between the subs about 4 inches wide on the inside.
Make sure that the end of the port "inside the box" is at least the same distance away from the back wall as the port diameter. If port is 4" round = 4.5" from wall

Attention:

- *Box sizes account for driver and port displacement
- *For higher SPL shortning the port length 3 in. will rise frequency +/- 5 Hz
- *Box specifications are internal. for external dimensions add the width of the box material to these dimensions.
- *A square port (slot) is preferred in high power applications for less vent noise.
- *Port area = width x height
- *For dual speaker, double the volume and the number of ports but keep the same length.
- *If possible use a divided box.
- *If a common chamber box is to be used, internal bracing is highly recommended
- *Please contact Massive Audio for custom applications.

