



# **R2-Series SUBWOOFER**

## **HAUT-PARLEUR D'EXTRÊMES GRAVES R2-Series**

### **APPLICATION GUIDE**

### **GUIDE D' APPLICATION**

#### **R2-W12D4**

12 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)  
Haut-parleur d'extrêmes graves à double bobine 12 po (4Ω)+(4Ω)

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#### **R2-W12D2**

12 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)  
Haut-parleur d'extrêmes graves à double bobine 12 po (2Ω)+(2Ω)

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#### **R2-W10D4**

10 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)  
Haut-parleur d'extrêmes graves à double bobine 10 po (4Ω)+(4Ω)

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#### **R2-W10D2**

10 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)  
Haut-parleur d'extrêmes graves à double bobine 10 po (2Ω)+(2Ω)

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#### **R2-W8D4**

8 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)  
Haut-parleur d'extrêmes graves à double bobine 8 po (4Ω)+(4Ω)

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#### **R2-W8D2**

8 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)  
Haut-parleur d'extrêmes graves à double bobine 8 po (2Ω)+(2Ω)

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**Reinforced Parabolic Cone Structure with  
Pulp/Kevlar Cone & PP/Ceramic Dust Cap**

**High Amplitude Multi-Roll  
Santoprene® Surround**  
(US Pat #8,208,677)

**Twist-Lock  
EZ-Change  
Grille System**

**Custom-Designed  
Cast Aluminum  
Frame**

**Perimeter Venting with  
Airflow Management  
System** (US Pat #7,684,585)

**High-Excursion Overhung  
Voice Coil Configuration**

**Compound Radius Curve  
Extended Pole Geometry**  
(US Pat #6,639,993)

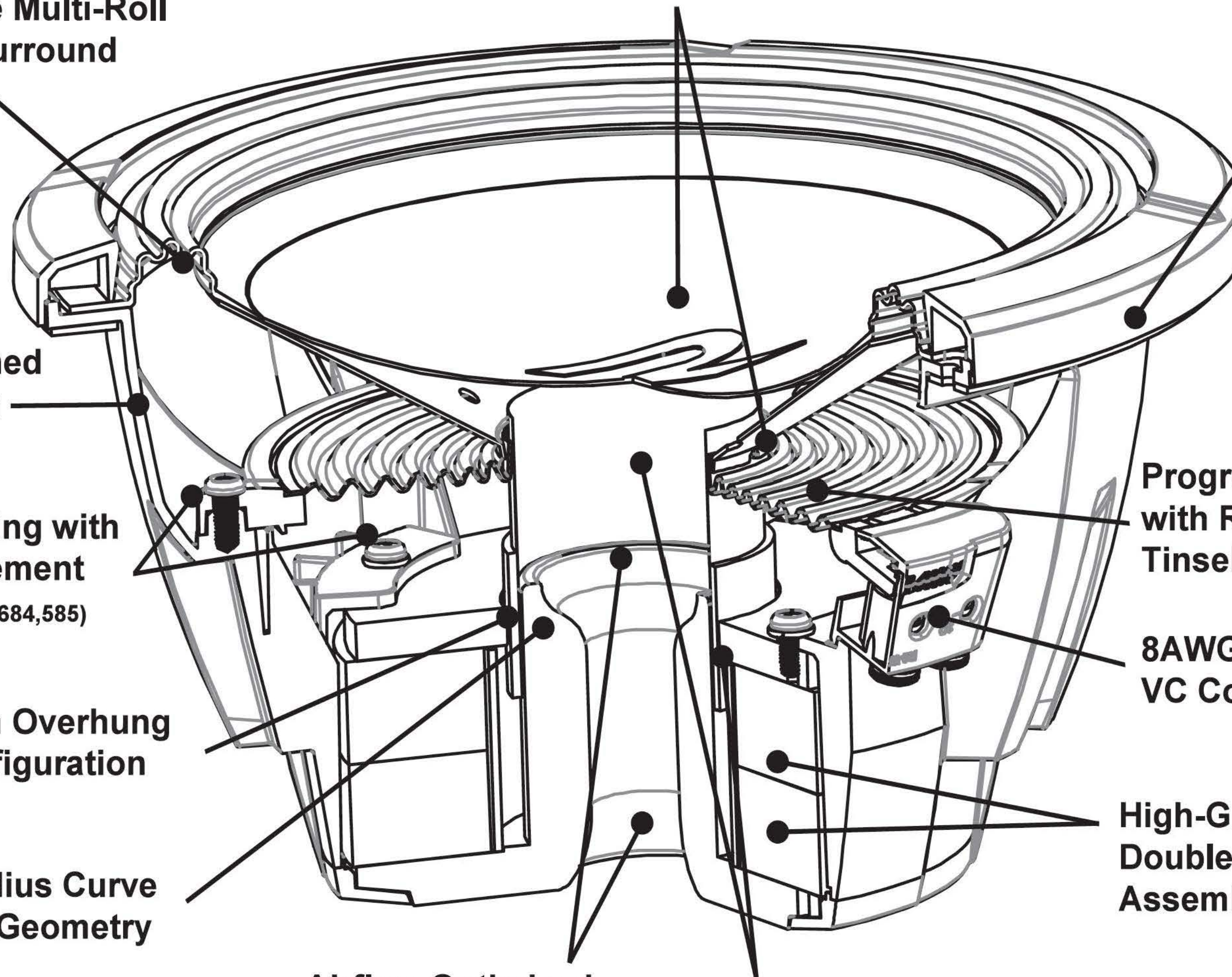
**Progressive Spider  
with Reinforced Layer  
Tinsel Leads** (US Pat #6,810,988)

**8AWG Push Terminals with  
VC Configuration Jumpers**

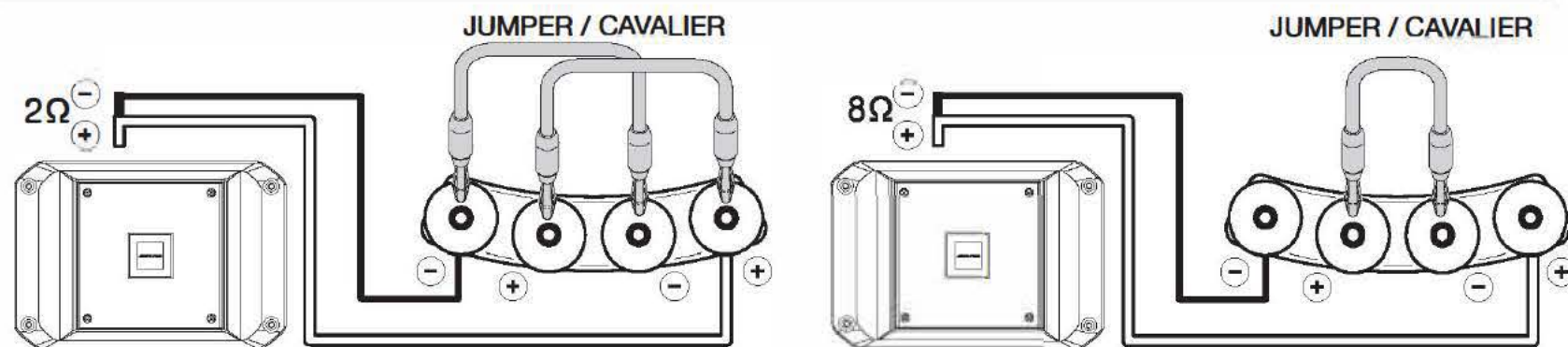
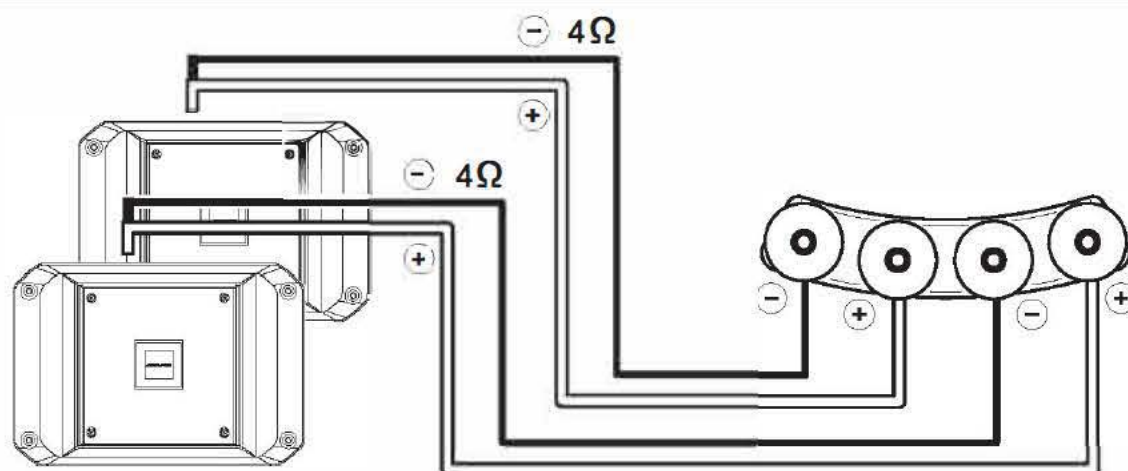
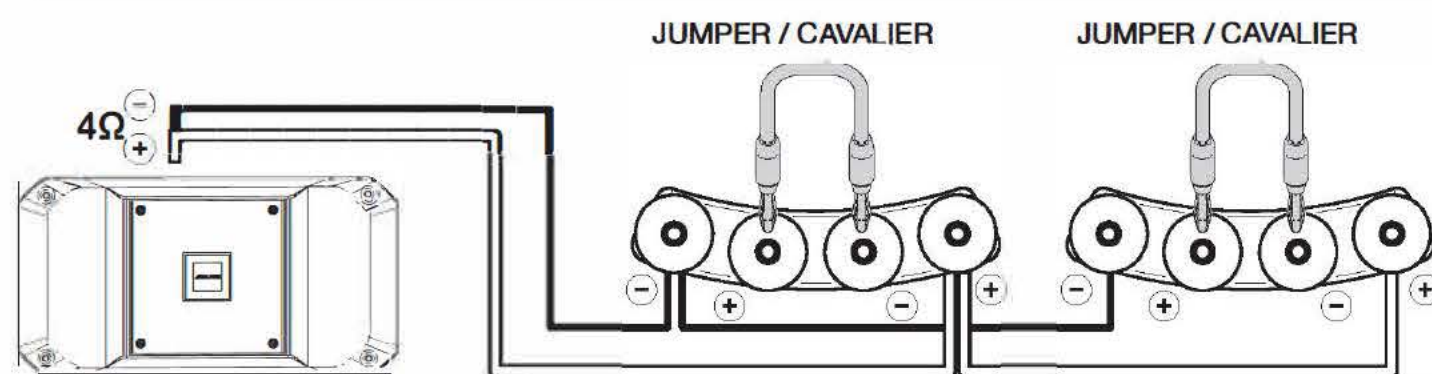
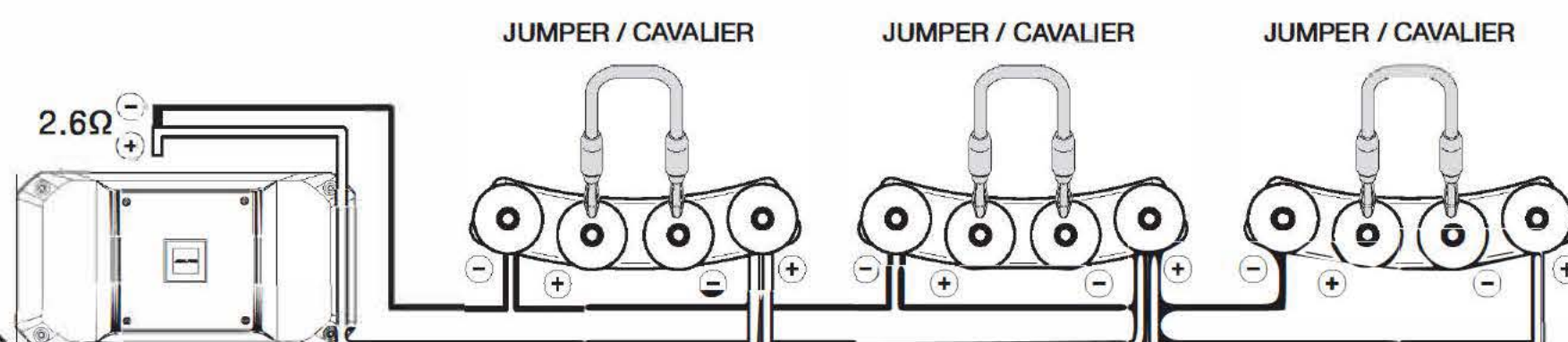
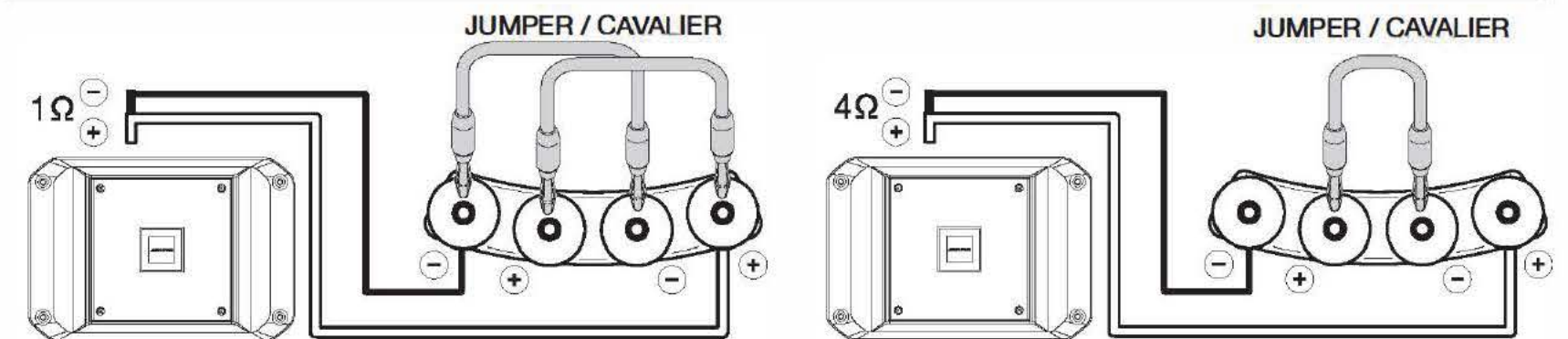
**High-Grade Strontium Ferrite  
Double-Stacked Magnet  
Assembly**

**Airflow Optimized  
Dual Flare Pole Vent**

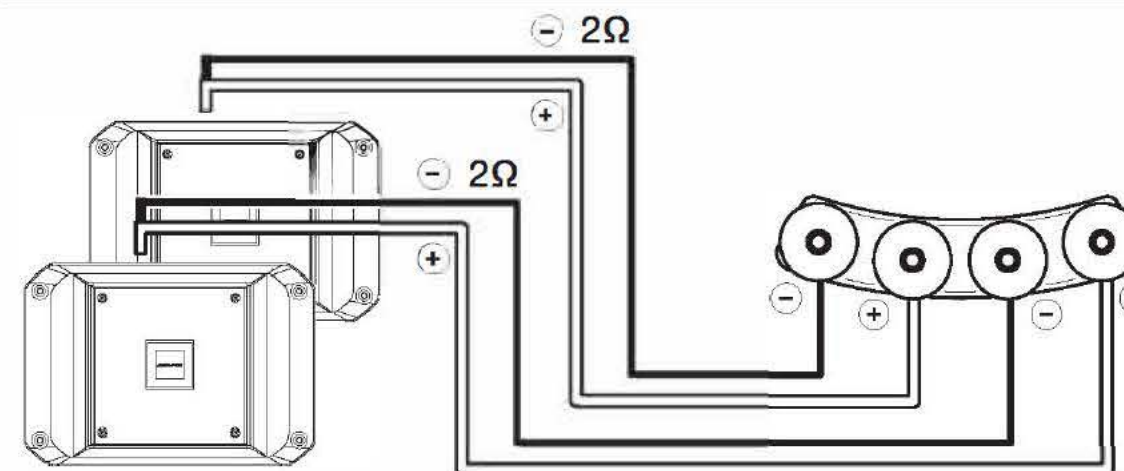
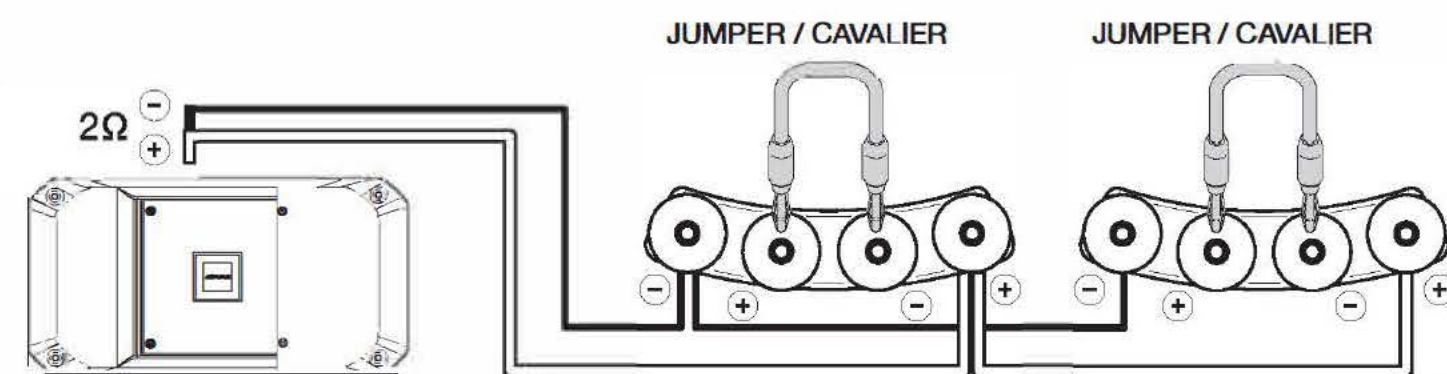
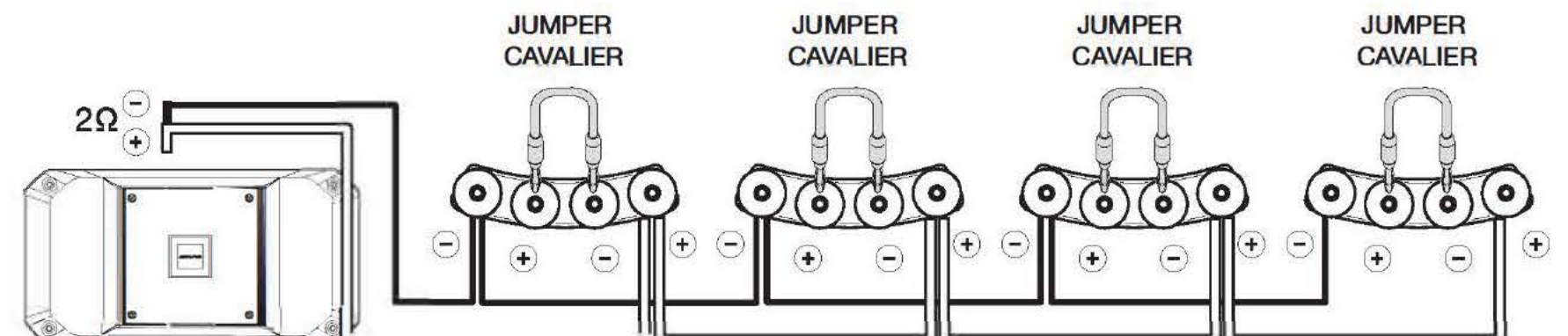
**65mm Voice Coil with High-Temp  
4-Layer DVC Winding on AL Former**





**ALPINE****4 + 4****Example 1** One Amplifier + One Subwoofer**Example 3** Two Amplifiers + One Subwoofer**Example 5** One Amplifier + Two Subwoofers**Example 7** One Amplifier + Three Subwoofers**2 + 2**R2-W804/R2-W1004/R2-W1204  
R2-W802/R2-W1002/R2-W1202**Example 2** One Amplifier + One Subwoofer

**Caution ! Consult amplifier owner's manual for 1Ω connection.**  
**Attention : lire le manuel de l'amplificateur pour la connexion à 1Ω .**

**Example 4** Two Amplifiers + One Subwoofer**Example 6** One Amplifier and Two Subwoofers**Example 8** One Amplifier + Four Subwoofers



General Specifications		
Sealed	Taille	
Frequency Response	Response en Fréquence	
Power Range	Plage de Puissance	
Power Handling	Puissance Admissible	
Magnet Weight	Poids de l'aimant	
Voice Coil Diameter	Diamètre de la bobine	
Thiel-Small Parameters		
Sensitivity (1W/1m)	Sensibilité (1W/1m)	SPL
DC Resistance	Résistance CC	Re
Free Air Resonance	Résonance à l'air libre	Fs
Equivalent Stiffness	Raiduer équivalente	Vas
Mechanical Q	Q Mécanique	Qms
Electrical Q	Q Électrique	Qes
Total Q	Q Total	Qts
Cone Area	Surface du diaphragme	Sd
Linear Excursion	Displacement Linéaire	Xmax (1-way)
Mechanical Travel	Déplacement Mécanique	Xmech (P-P)

Note: Specifications subject to change without notice

R2-Series					
R2-W8D2	R2-W8D4	R2-W10D2	R2-W10D4	R2-W12D2	R2-W12D4
2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω
8"		10"		12"	
30Hz-200Hz		26Hz-200Hz		24Hz-200Hz	
150W-350W RMS		300W-750W RMS			
350W RMS (efficace) / 1000W PEAK (de crête)		750W RMS (efficace) / 2250W PEAK (de crête)			
56 oz		123 oz		144 oz	
40 mm (1.6")		65.5 mm (2.6")			
83.6 dB	83.7 dB	82.3 dB	82.8 dB	85.0 dB	84.6 dB
1.8Ω+1.8Ω	3.6Ω+3.6Ω	1.9Ω+1.9Ω	3.5Ω+3.5Ω	1.9Ω+1.9Ω	3.5Ω+3.5Ω
42 Hz	43 Hz	31 Hz	32 Hz	29 Hz	30 Hz
10.1L	10.5 L	18.2 L	18.2 L	36.9 L	32.8 L
7.69	7.08	7.07	6.50	6.32	6.51
0.52	0.58	0.5	0.52	0.44	0.55
0.48	0.53	0.47	0.48	0.41	0.51
201 cm²		333 cm²		479 cm²	
12mm		20mm			
52mm		70mm		72mm	



		R2-W8D2/D4	R2-W10D2/D4	R2-W12D2/D4
Sealed Box Range	Net Internal Volume	0.15-0.45 ft³	0.4-0.85 ft³	0.55-1.0 ft³
Recommended Sealed Box	External Box Dimensions	13" x 13" x 5.5"	12" x 12" x 10.5"	14" x 14" x 11"
	Gross Internal Volume	0.30 ft³	0.58 ft³	0.85 ft³
	Net Internal Volume	0.25 ft³	0.50 ft³	0.75 ft³
	F3, Qtc	D2: 59 Hz, 0.73 D4: 59 Hz, 0.72	D2: 44 Hz, 0.70 D4: 42 Hz, 0.78	D2: 43 Hz, 0.65 D4: 39 Hz, 0.84
Vented Box Range	Net Internal Volume	0.25-0.7 ft³	0.75-1.3 ft³	1.0-1.5 ft³
	Tuning	36-40Hz	35-39Hz	33-37Hz
Recommended Vented Box	External Box Dimensions	11" x 9.5" x 21"	13" x 11.5" x 25.25"	12.5" x 14" x 25.5"
	Gross Internal Volume	0.86 ft³	1.58 ft³	1.91 ft³
	Vent Area (dimensions)	8 in² (8" x 1")	15 in² (10" x 1.5")	18.75 in² (12.5" x 1.5")
	Vent length	17.5"	19.5"	22"
	Vent Displacement	0.13 ft³	0.25 ft³	0.36 ft³
	Net Internal Volume (Vb)	0.68 ft³	1.25 ft³	1.45 ft³
	F3, ripple, Fb	D2: 33 Hz, 2.5 dB, 39 Hz D4: 32 Hz, 3.2 dB, 39 Hz	D2: 29 Hz, 6.0 dB, 37 Hz D4: 29 Hz, 6.3 dB, 37 Hz	D2: 29 Hz, 4.3 dB, 36 Hz D4: 28 Hz, 5.8 dB, 36 Hz

**Notes:**

1) Recommended enclosure net internal volume is based upon 3/4" (19mm) MDF enclosure construction.

2) Consult the table below for alternative enclosure net internal volume calculation.

Front Mount Displacement* (magnet in)	-0.050 ft³	-0.08 ft³	-0.10 ft³
Reverse Mount Added Volume* (magnet out)	+0.035 ft³	+0.05 ft³	+0.09 ft³

\*Based upon 3/4" (19mm) baffle thickness, with opening cut approximately to gasket inner diameter

		R2-W8D2/D4	R2-W10D2/D4	R2-W12D2/D4
Gamme Box Sealed	Net volume interne	0.15-0.45 pi³	0.4-0.85 pi³	0.55-1.0 pi³
Recommended Boîte Scellé	Dimensions extérieures	13 po x 13 po x 5.5 po	12 po x 12 po x 10.5 po	14 po x 14 po x 11 po
	Volume intérieur brut	0.30 pi³	0.58 pi³	0.85 pi³
	Volume intérieur Net ***	0.25 pi³	0.50 pi³	0.75 pi³
	F3, Qtc	D2: 59 Hz, 0.73 D4: 59 Hz, 0.72	D2: 44 Hz, 0.70 D4: 42 Hz, 0.78	D2: 43 Hz, 0.65 D4: 39 Hz, 0.84
Gamme charge bass-reflex	Volume net interne	0.25-0.7 pi³	0.75-1.3 pi³	1.0-1.5 pi³
	mise au point	36-40Hz	35-39Hz	33-37Hz
Recommended charge bass-reflex	Dimensions extérieures	11 po x 9.5" po x 21 po	13 po x 11.5 po x 25.25 po	12.5 po x 14 po x 25.5 po
	Volume intérieur brut	0.86 pi³	1.58 pi³	1.91 pi³
	Aire de l'évent (dimensions)	8 po² (8 po x 1 po)	15 po² (10 po x 1.5 po)	18.75 po² (12.5 po x 1.5 po)
	Longueur de l'évent	17.5 po	19.5 po	22 po
	déplacement de l'évent	0.13 pi³	0.25 pi³	0.36 pi³
	Volume intérieur Net (Vb)***	0.68 pi³	1.25 pi³	1.45 pi³
	F3, crête, Fb	D2: 33 Hz, 2.5 dB, 39 Hz D4: 32 Hz, 3.2 dB, 39 Hz	D2: 29 Hz, 6.0 dB, 37 Hz D4: 29 Hz, 6.3 dB, 37 Hz	D2: 29 Hz, 4.3 dB, 36 Hz D4: 28 Hz, 5.8 dB, 36 Hz

**Notes:**

1) Recommandé enceinte volume net interne est basée sur 3/4" (19mm) de construction boîtier en MDF.

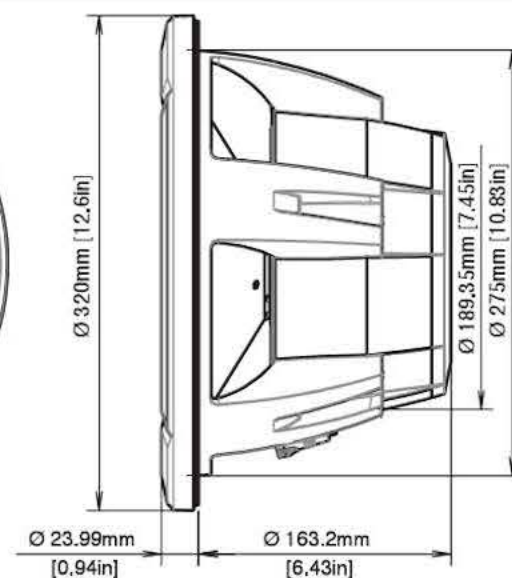
2) Consulter le tableau ci-dessous pour le calcul de filet d'enclos alternative volume interne.

Avant le déplacement du Mont * (aimant)	-0.050 ft³	-0.08 ft³	-0.10 ft³
Inverser Volume mont Ajouté * (des aimants)	+0.035 ft³	+0.05 ft³	+0.09 ft³

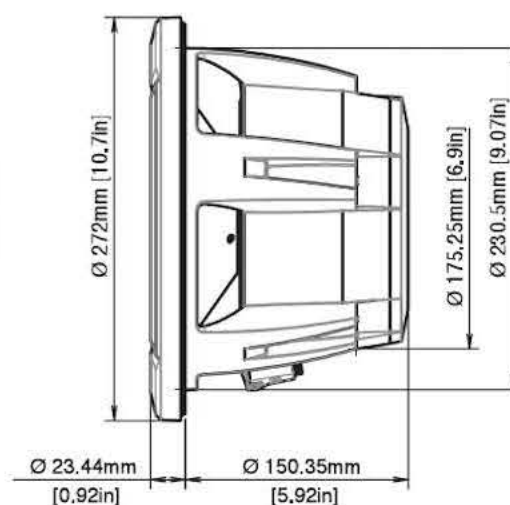
\* Sur la base de l'épaisseur du déflecteur 3/4" (19mm), avec une ouverture coupée à peu près à joint diamètre intérieur



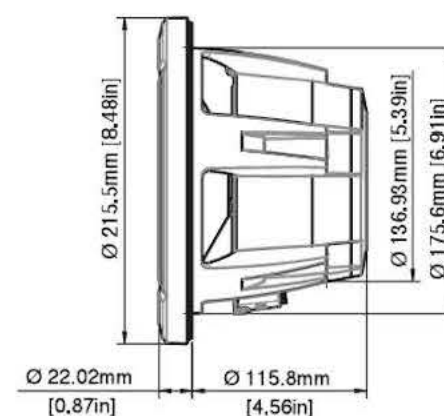
R2-W12D2  
R2-W12D4



R2-W10D2  
R2-W10D4



R2-W8D2  
R2-W8D4



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Printed in CHINA