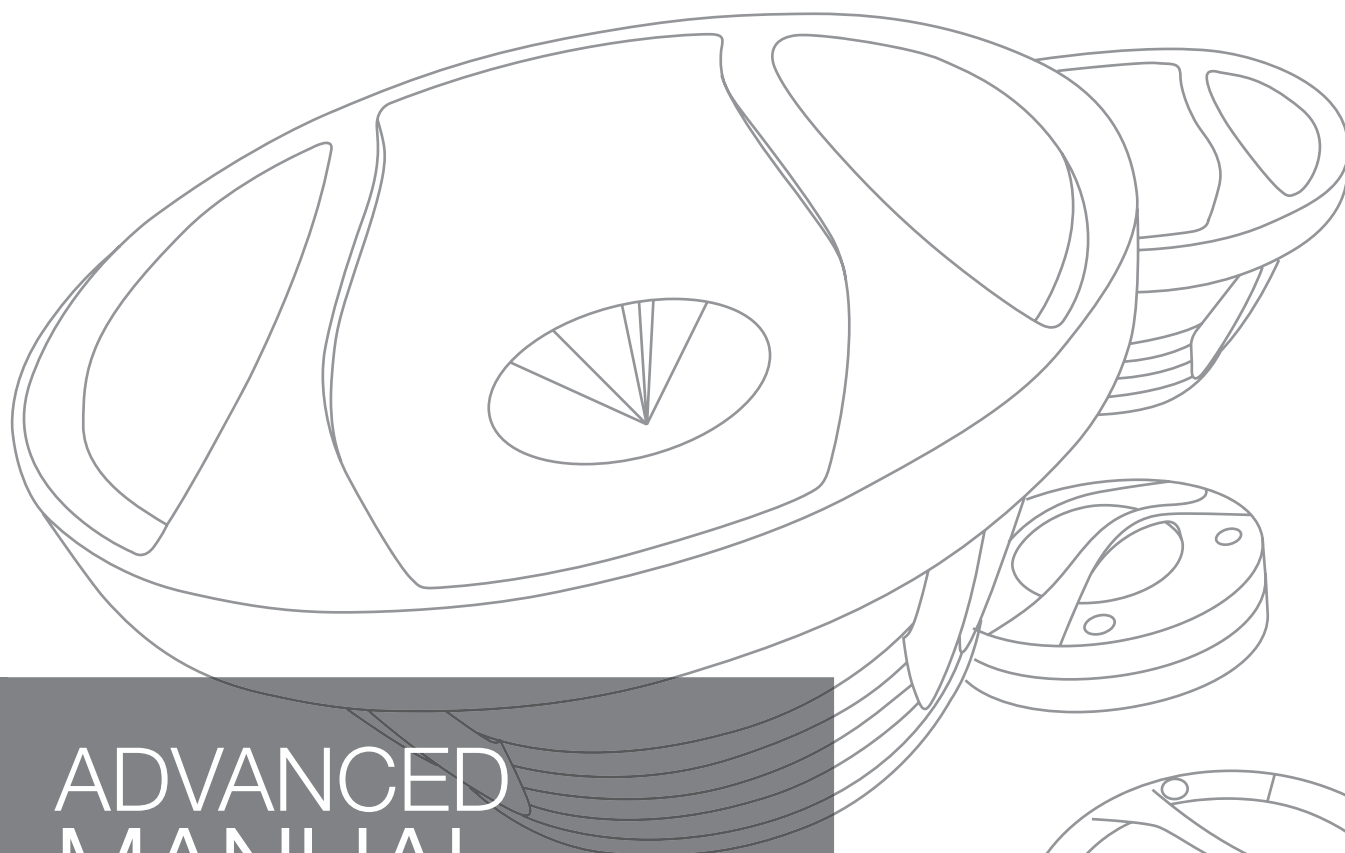


THESIS

Technology Art & Sound
Manufactured by
elettromedia
Italy

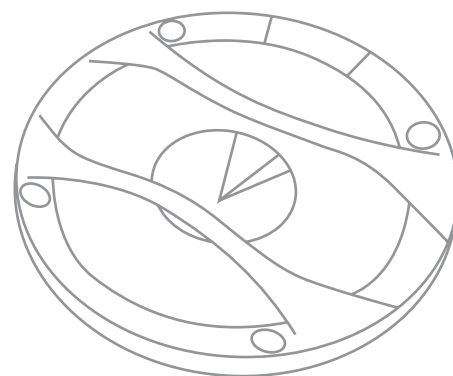


ideato,
progettato,
costruito
in Italia



ADVANCED MANUAL TH SPEAKERS

Rev. b



audison
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THESIS

The Project

In order to create a system capable of reproducing amazing, first-class Sound, each acoustical component must abide to the most elevated standards of quality and design.

The Thesis amplifiers offer their best performance when used with speakers designed with the same philosophy.

Throughout the years Thesis has represented a name referenced to the perfection of electronic design and performance. Today, technological development has enabled us to push the envelope in terms of the prestigious Thesis tradition. Creating a supreme product in amplification, the Audison development team has achieved their ambition of reproducing an unparalleled Sound.

Target

A speaker's technical definition as an electromechanical device which converts the electrical signal provided by the amplification into acoustical pressure waves, cannot alone describe its mechanical complexity and its emotional role. With the Thesis speakers, the Audison R&D team have reached a significant evolution; producing a speaker system that can match and complement the Audison amplifiers sound, worthy of the Thesis nomenclature. Unique and groundbreaking: Beyond the absolute.

Transparency

The ability to see the heart of the speakers is the chance to call forth the emotions, to discover what is hidden behind a great acoustical result. Because transparency is not merely a design element, rather transparency of Sound. Thesis speakers awake the passion for music listening with a total involvement of the senses: fascinating to the eye, seducing to the touch, captivating to the ear.

Musical instruments

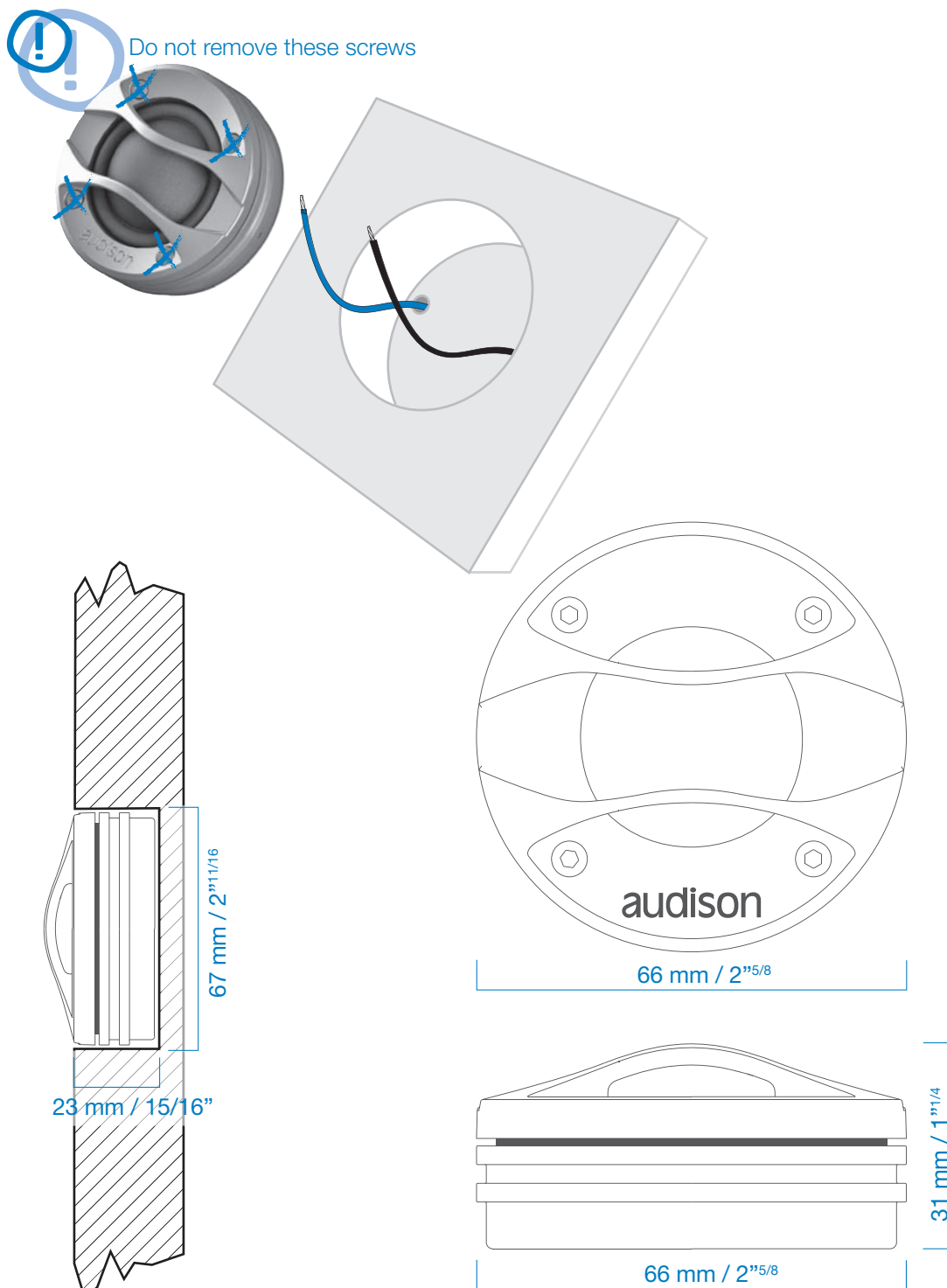
Like musical instruments are predestined to the creation of sound, Thesis speakers are esigned for music reproduction. Wind, chord, percussion and electrical instruments along with the human voice contribute to the creation of the musical message, complex yet harmonious. In the same way, a system composed by the tweeter violino, the midrange voce, the woofer sax and the subwoofer basso of the Thesis range become an extraordinary harmonious group.

A result that goes beyond High Fidelity, a system capable of provoking intense emotions.

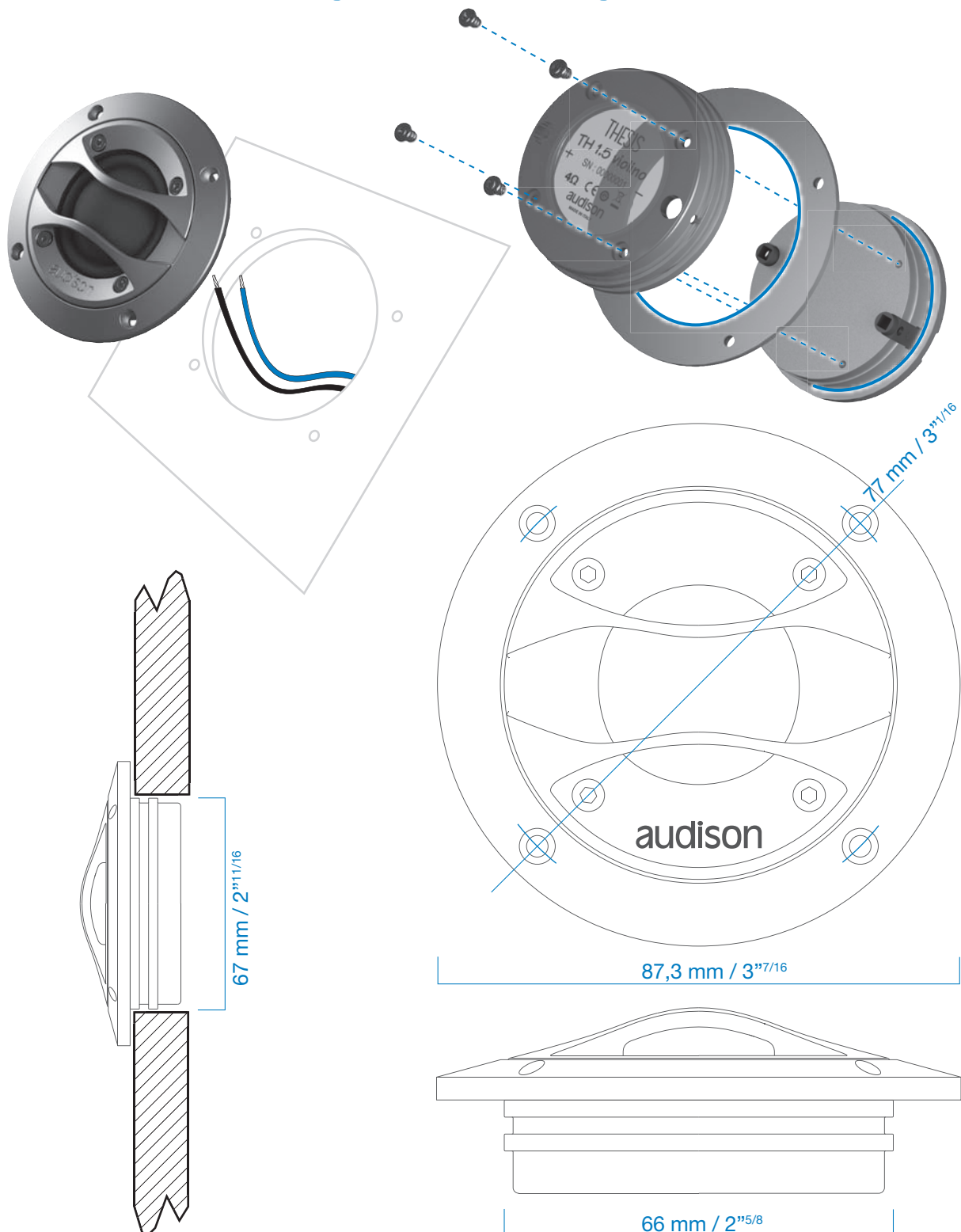
Design

Overtaking the intrinsic limits of traditional speakers was the primary goal relating to the esearch for this project. Thanks to the most advanced FEM (Finite Element Modelling) software along with measurement and analysis devices such as Klippel®, a mathematical model was worked out to start the development. This, combined with intense prototype development, was used in search of the ideal transducer. A big magnet and a rigid cone are not sufficient to create strong and detailed sound. Sound is generated by the alchemy of elements that cannot be seen, from the pulsing heart of the speaker.

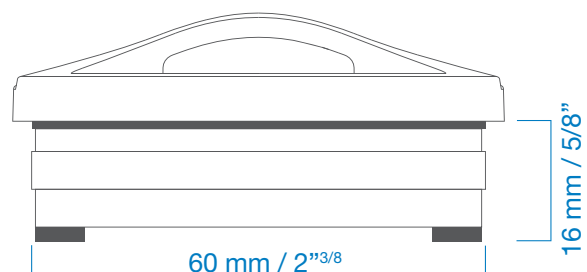
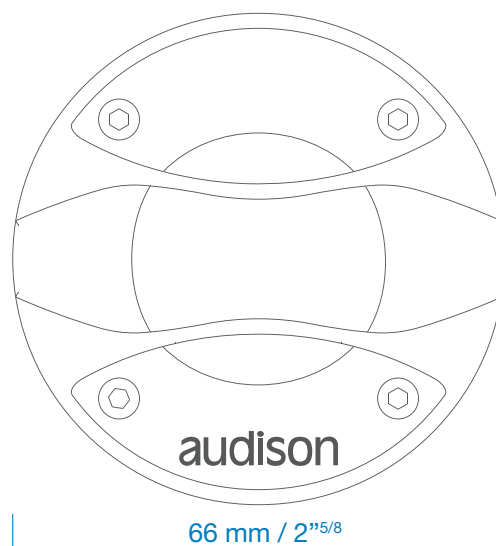
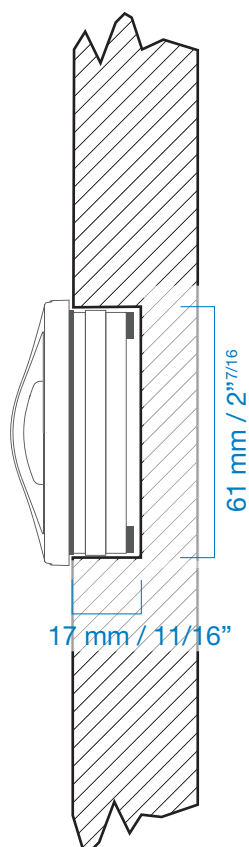
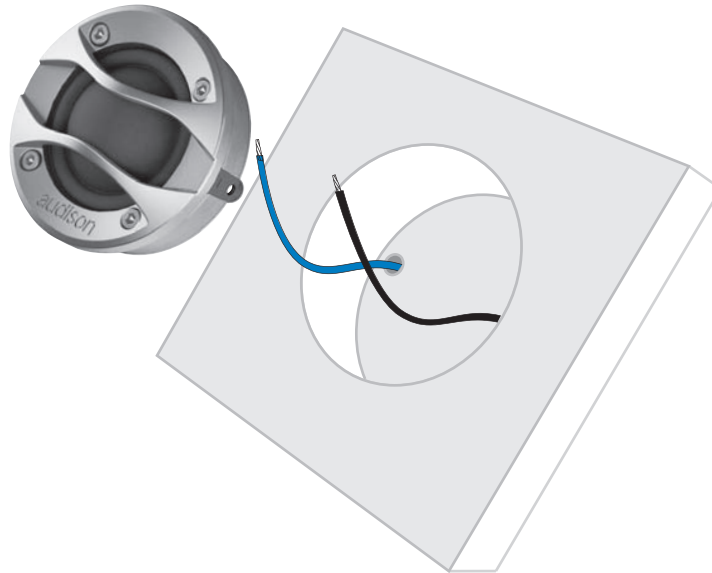
Flush mounting without trim ring



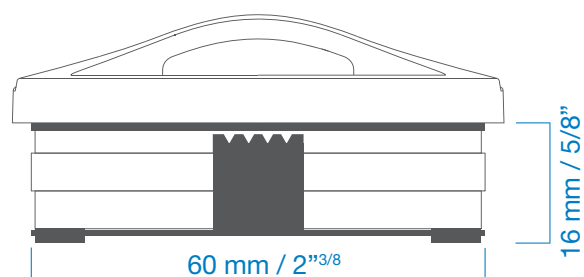
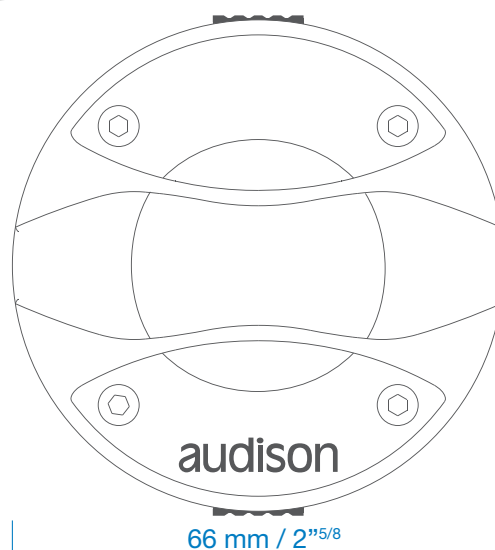
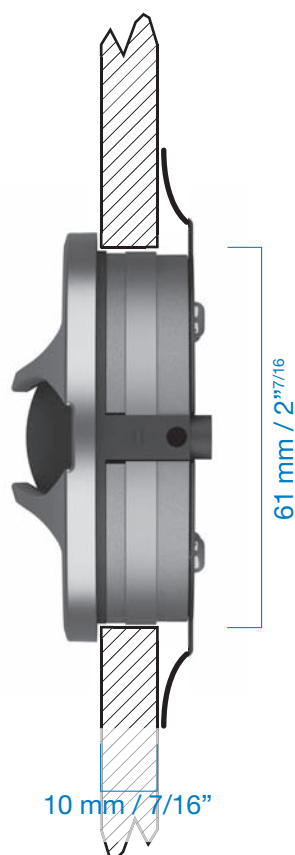
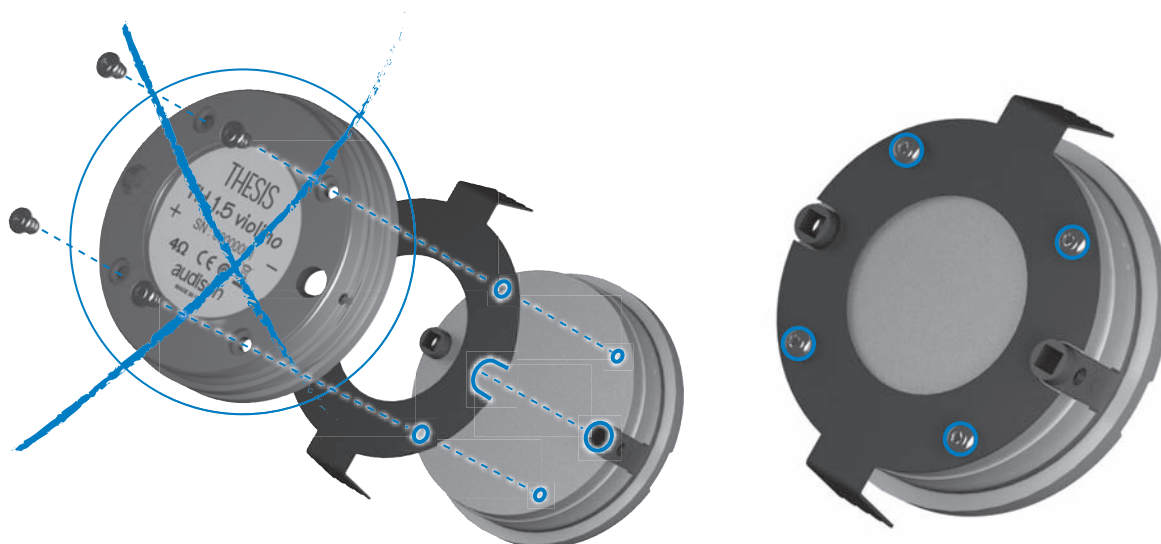
Flush mounting with trim ring



Surface mounting without trim ring

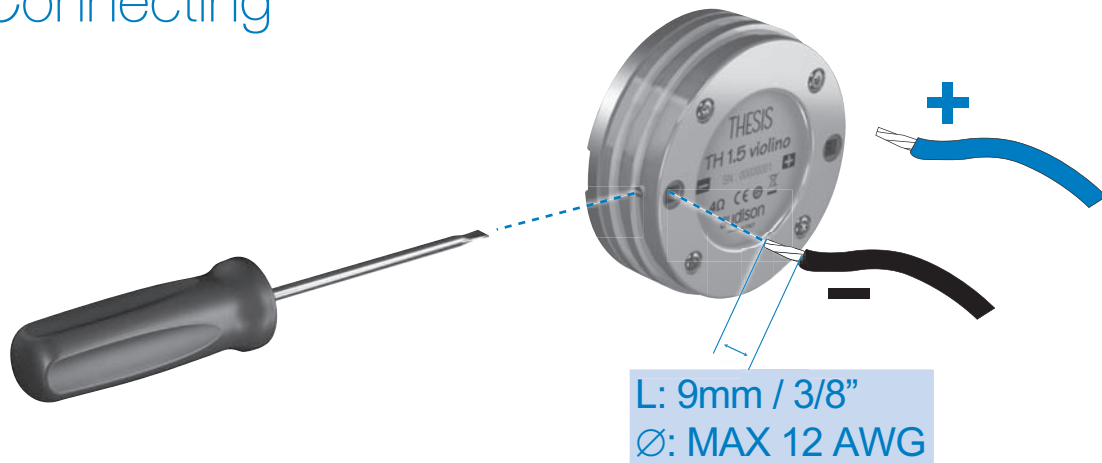


Surface mounting without trim ring, with rear bracket

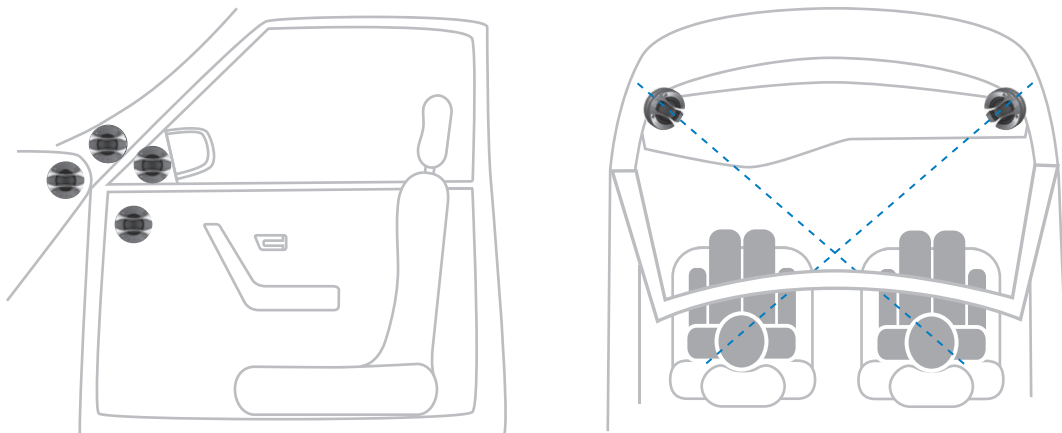
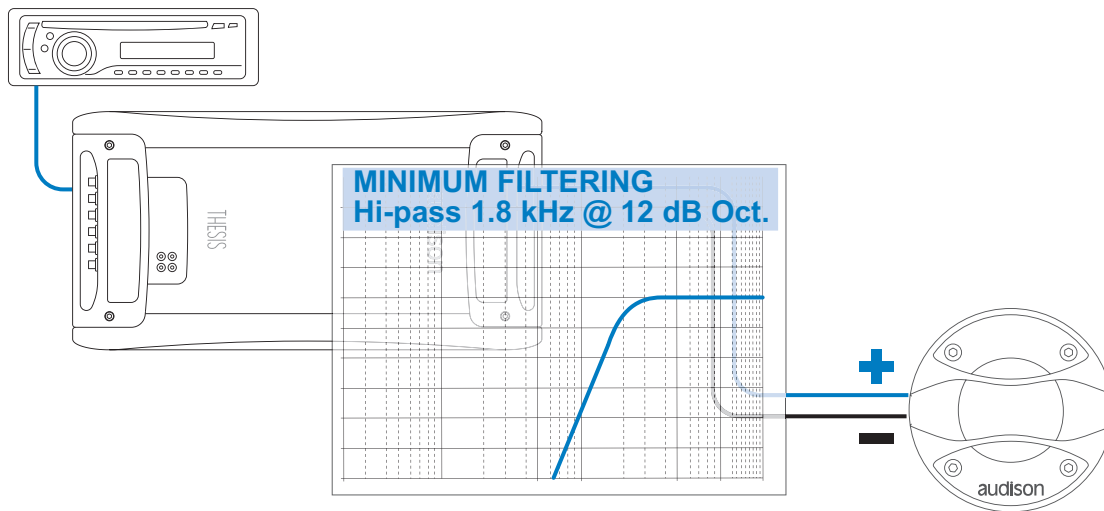


THESIS

Connecting

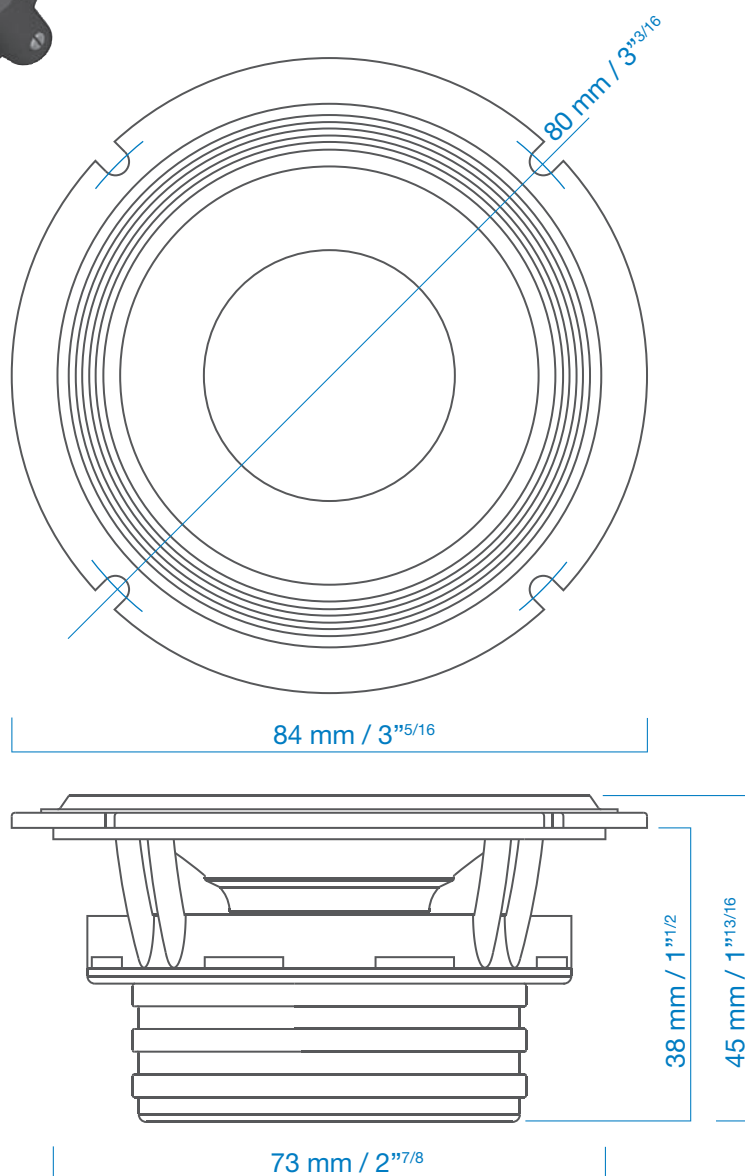


Filtering, suggested positioning/angle

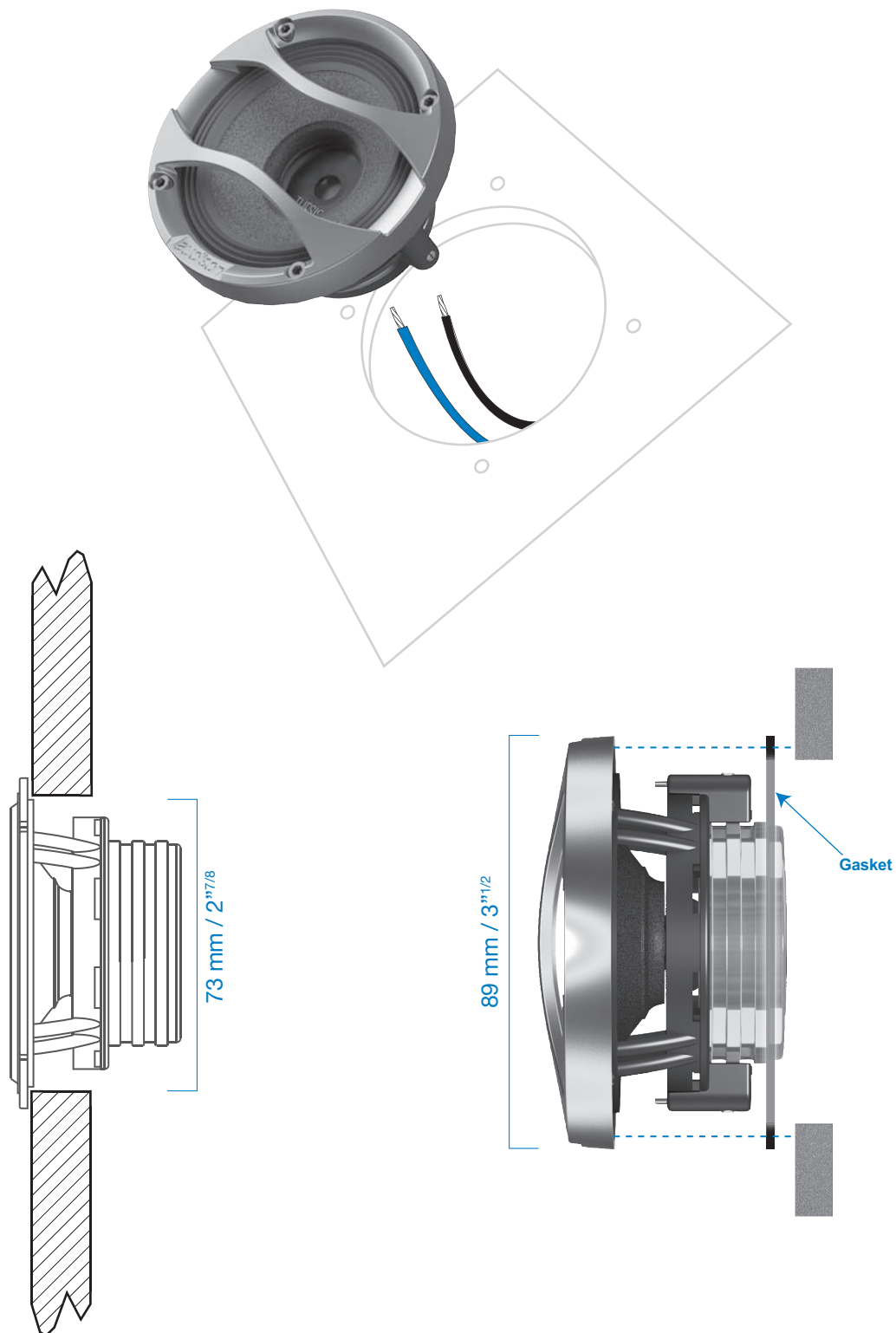




Sizing template



Factory cut-out and flush mounting

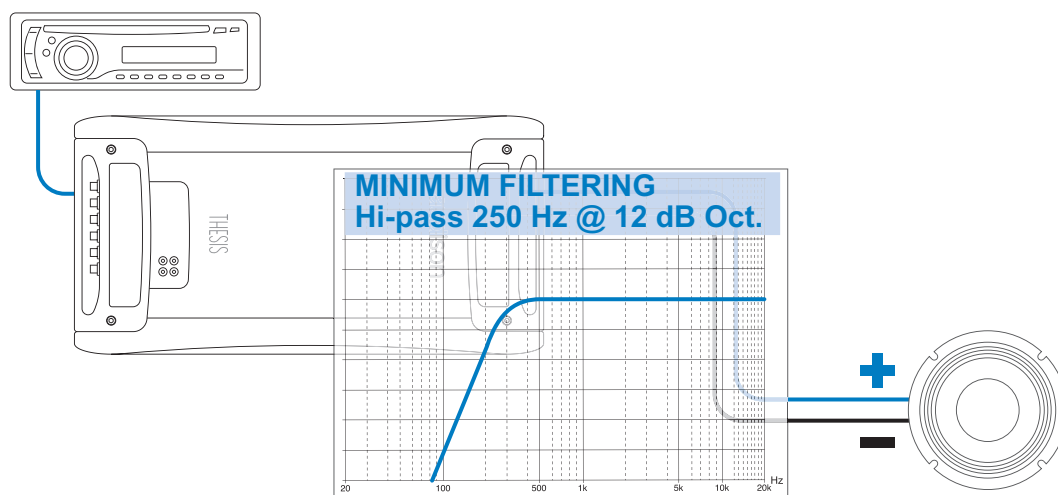


THESIS

Connecting

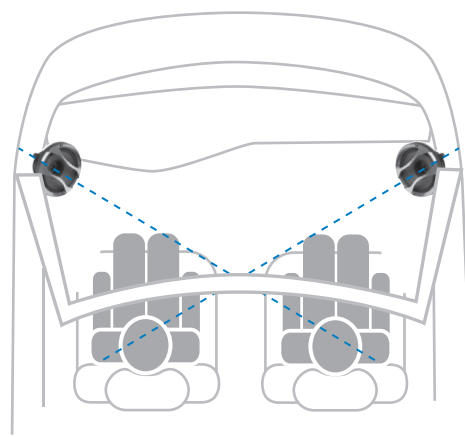
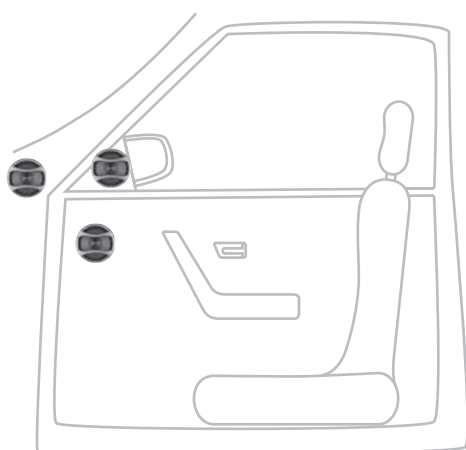
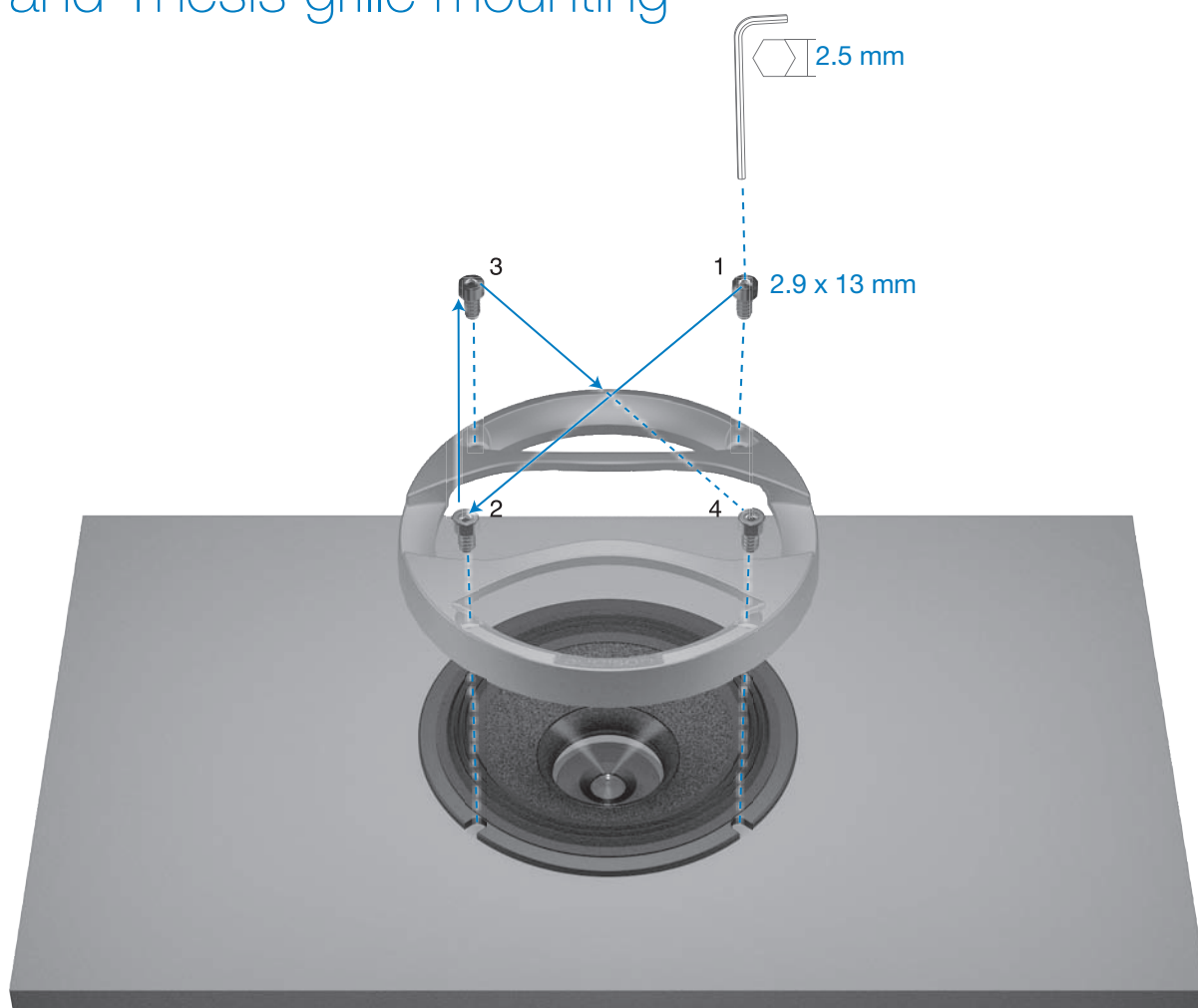


Filtering

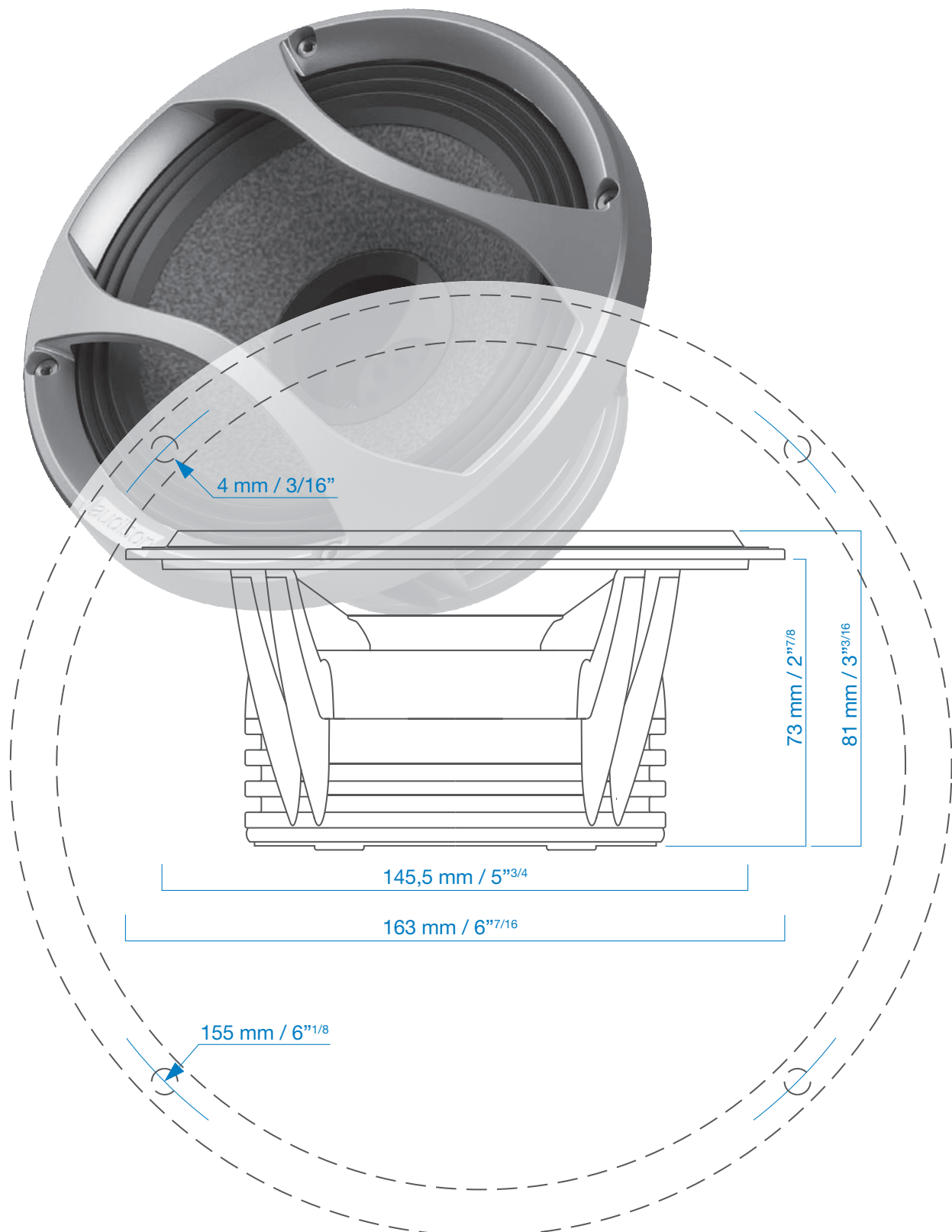


THESIS

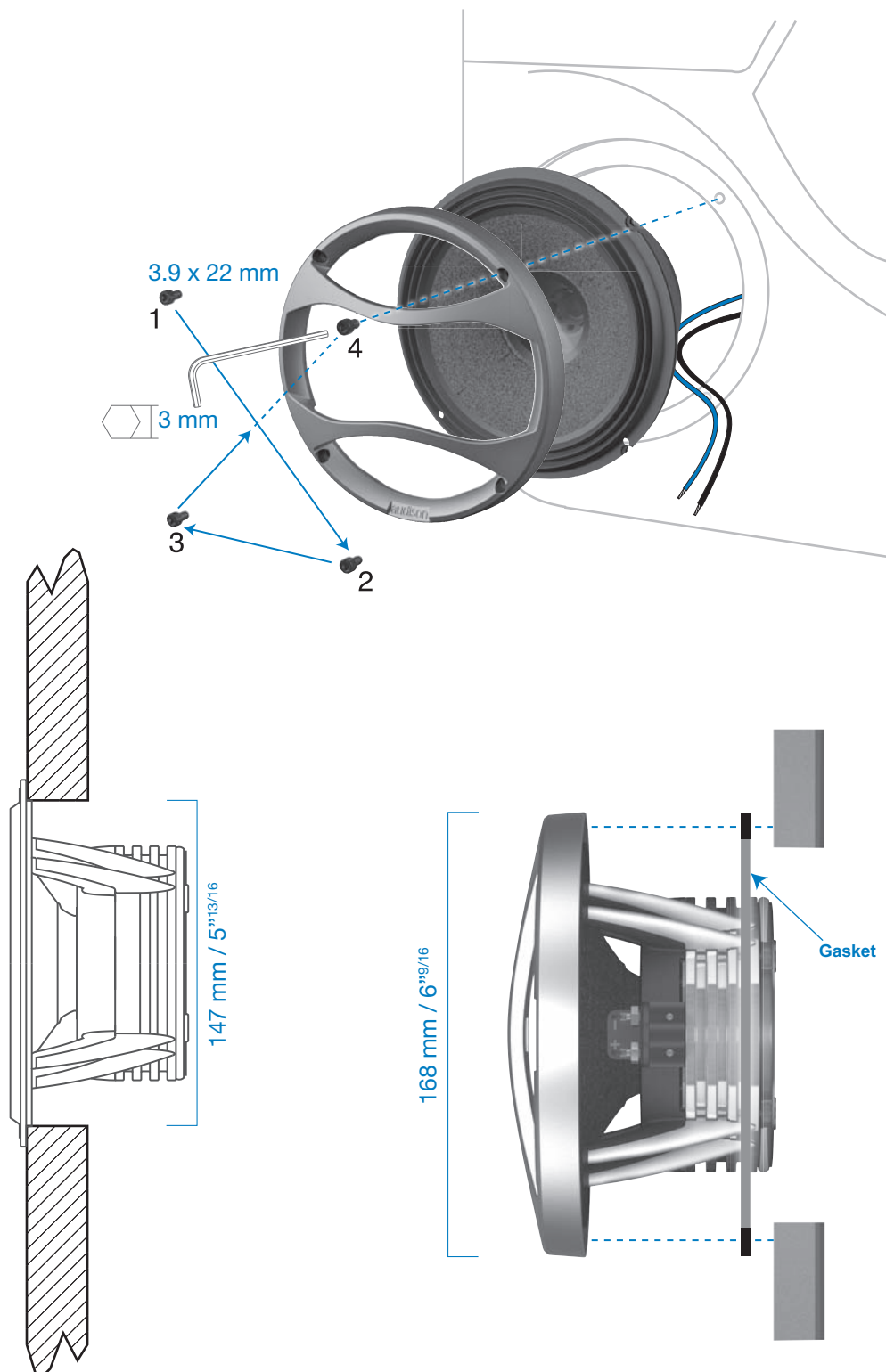
Suggested positioning/angle and Thesis grille mounting



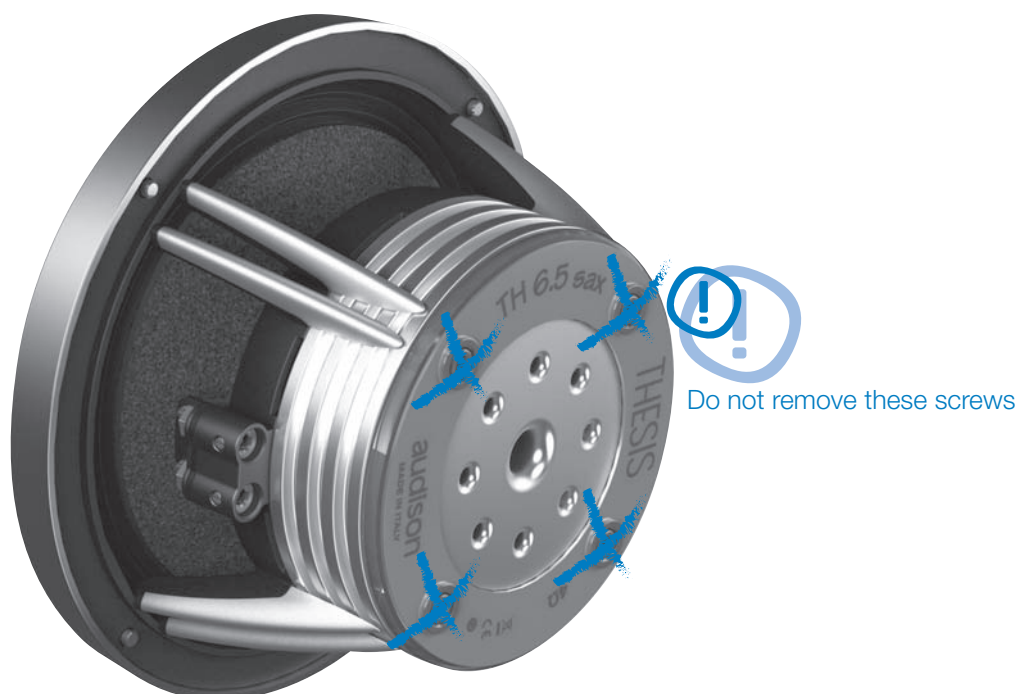
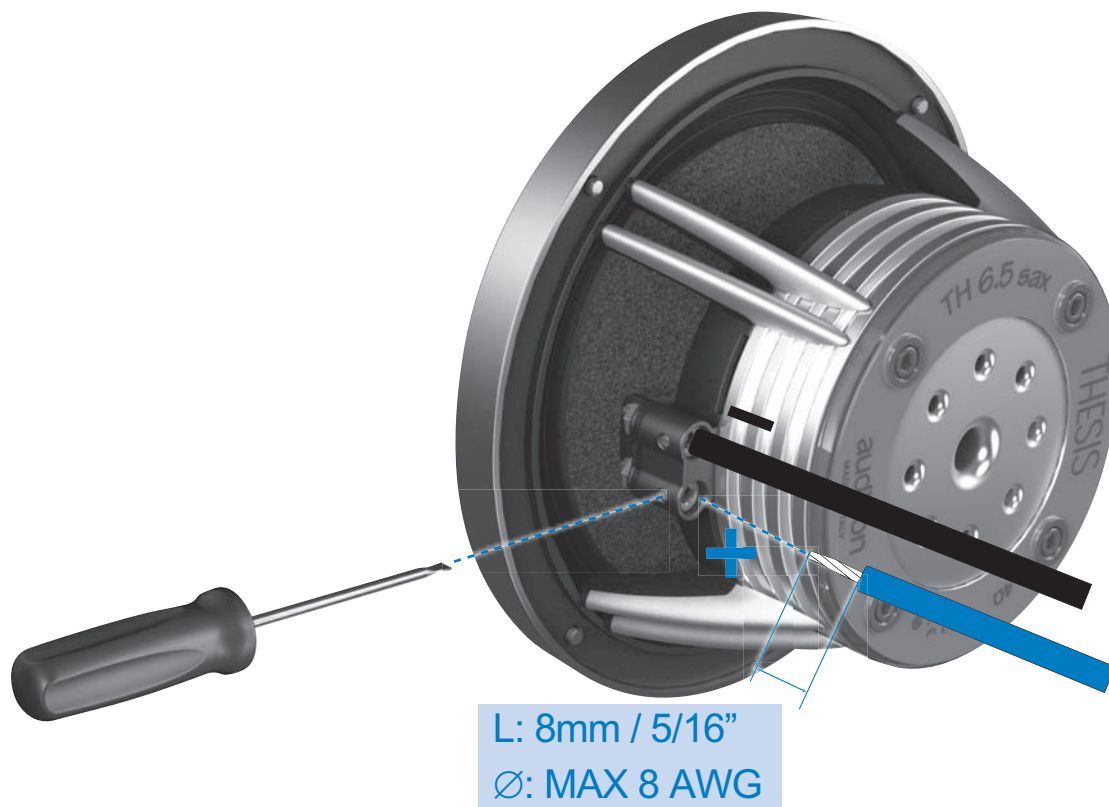
Sizing template



Factory cut-out and flush mounting

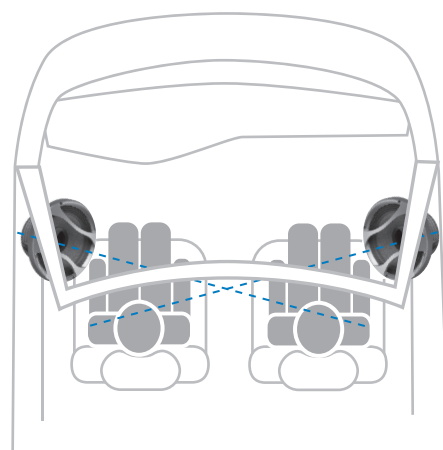
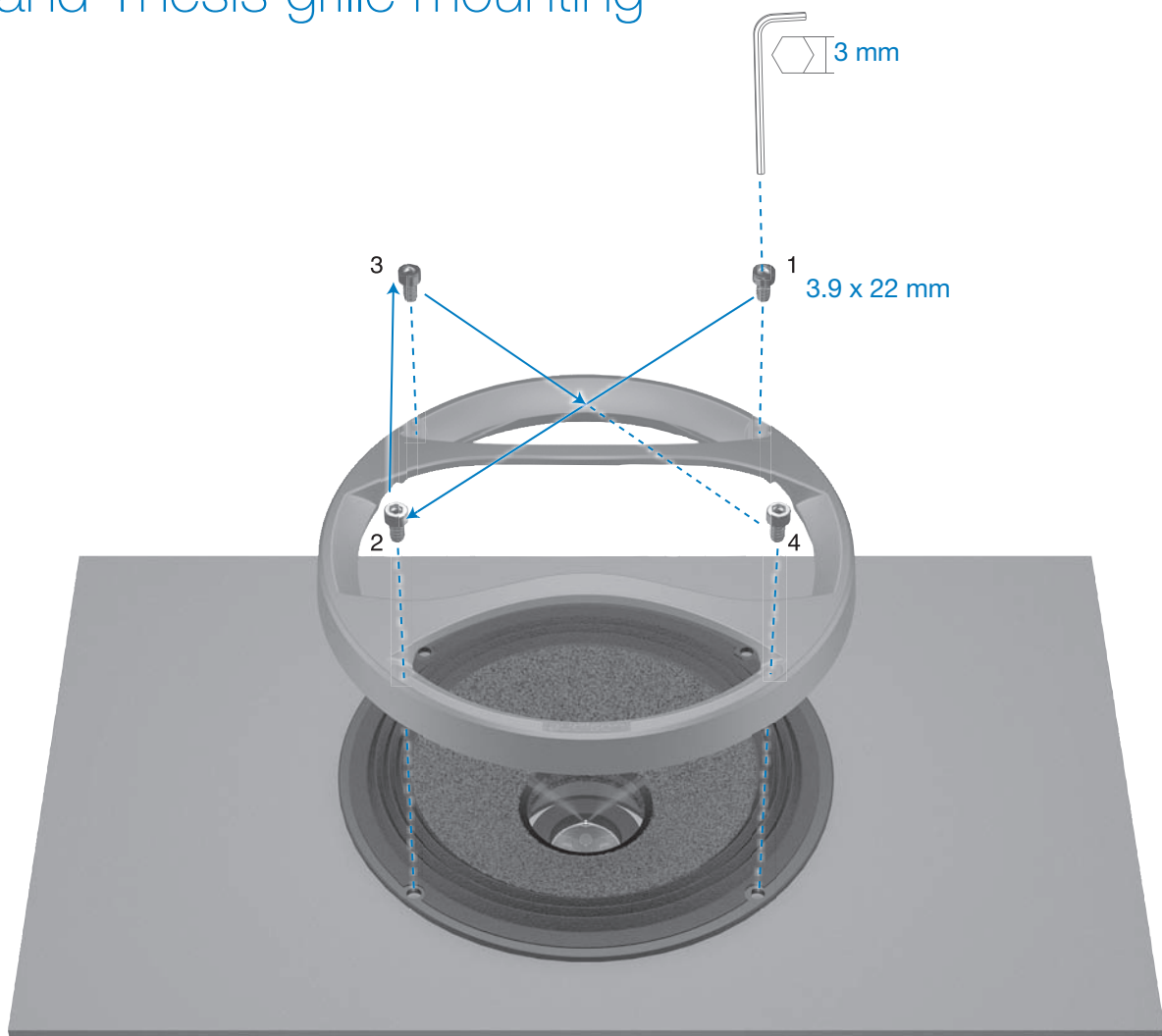


Connecting

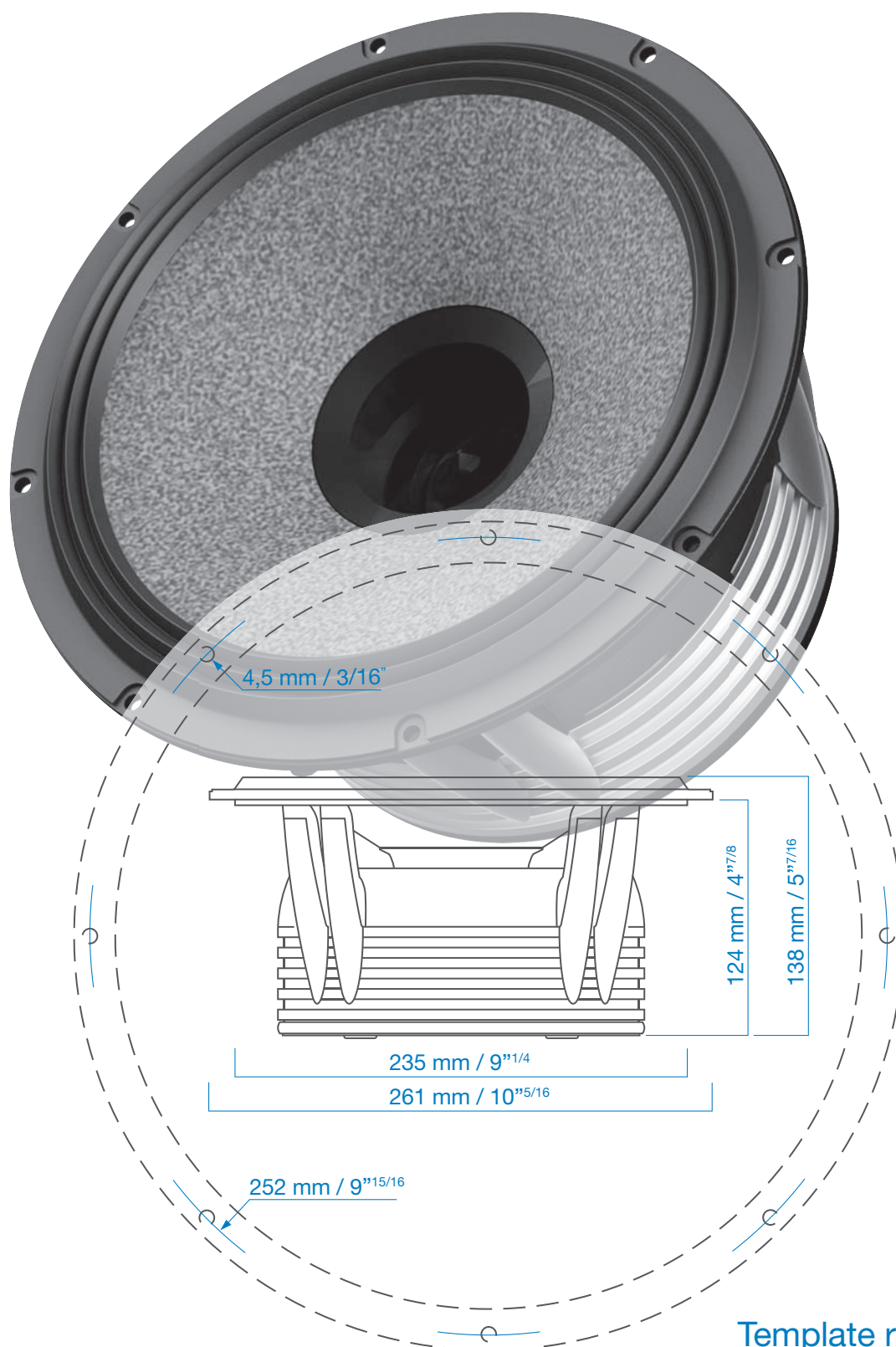


THESIS

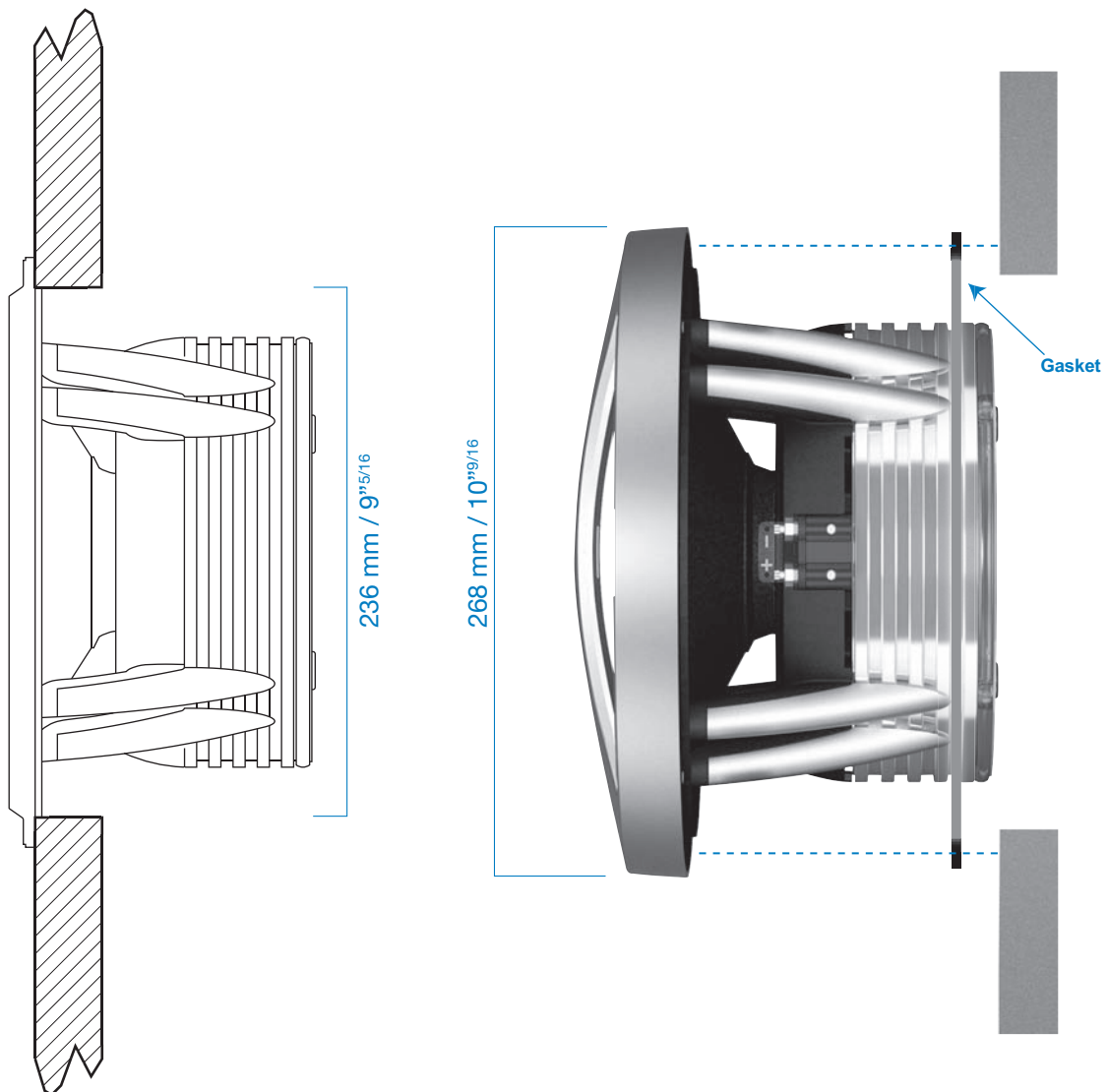
Suggested positioning/angle and Thesis grille mounting



Sizing template

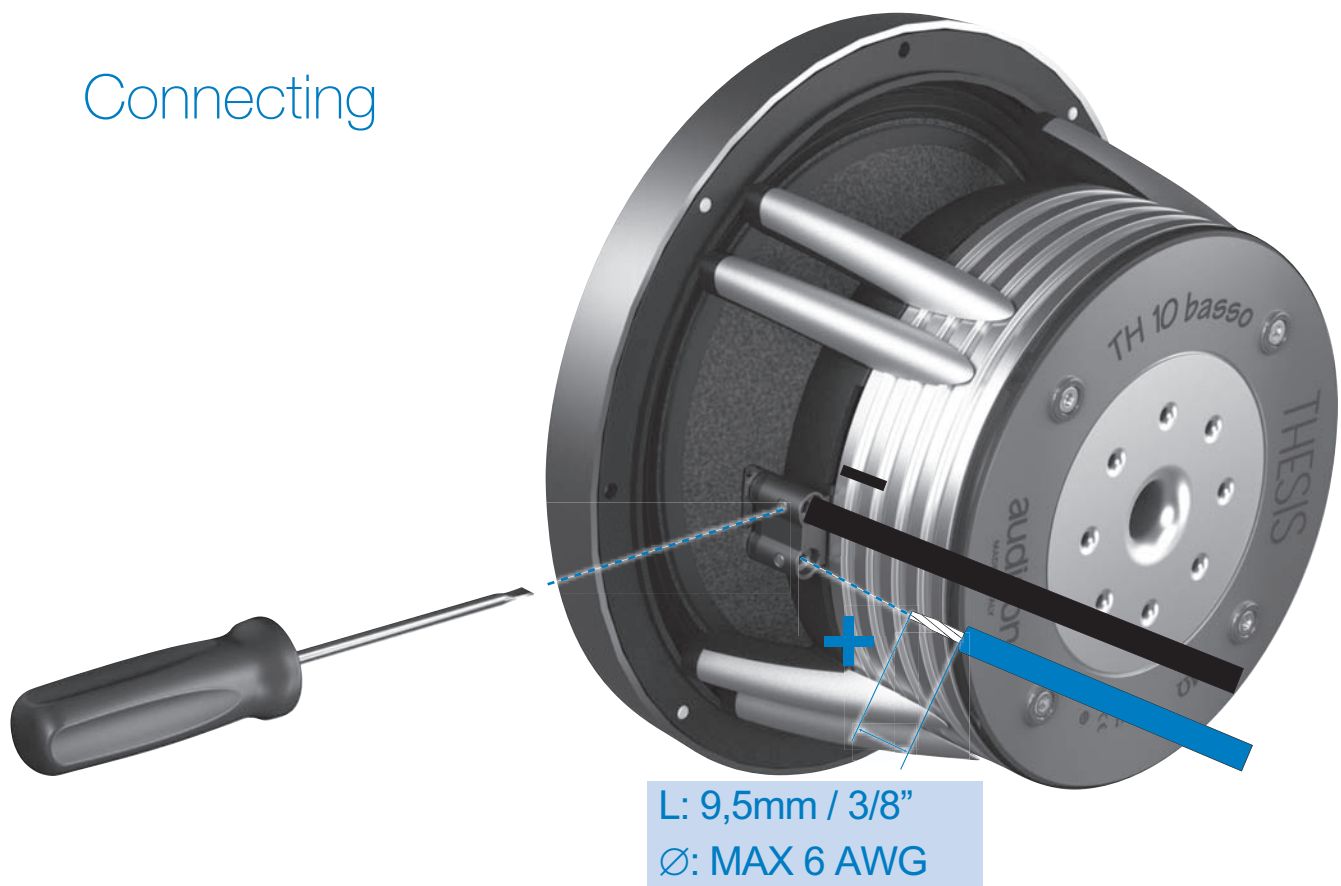


Flush mounting

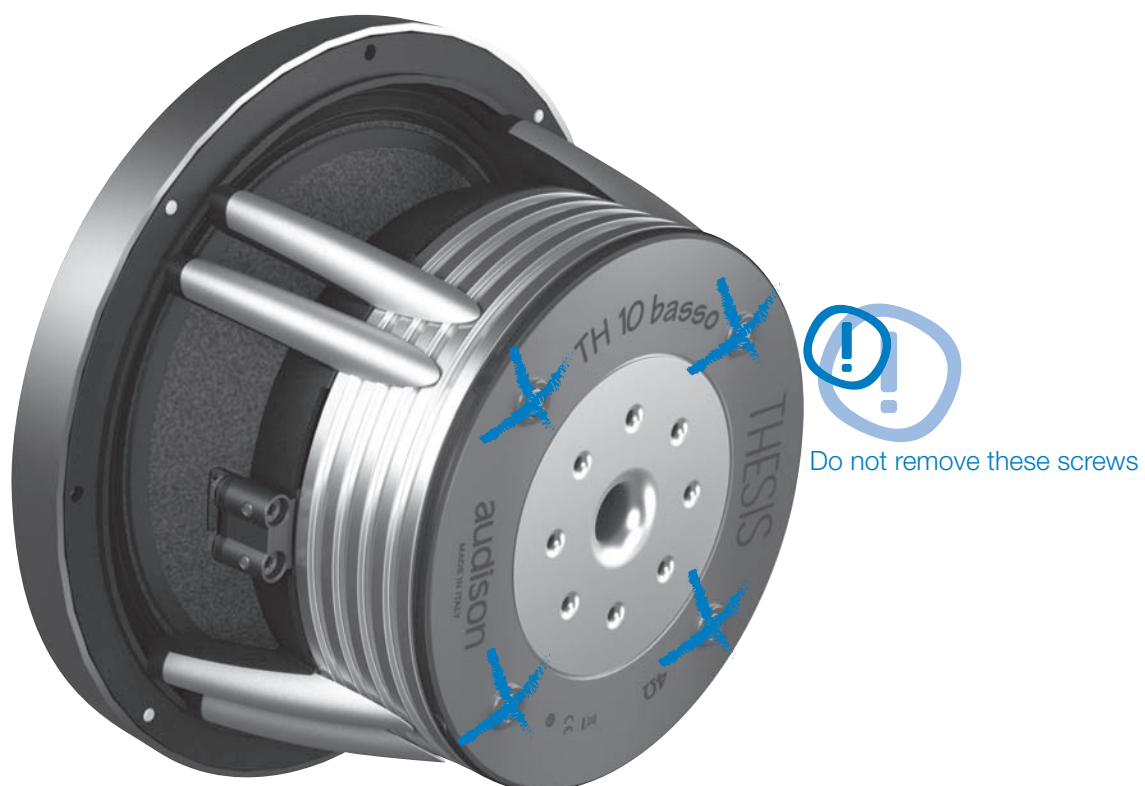


THE SIS

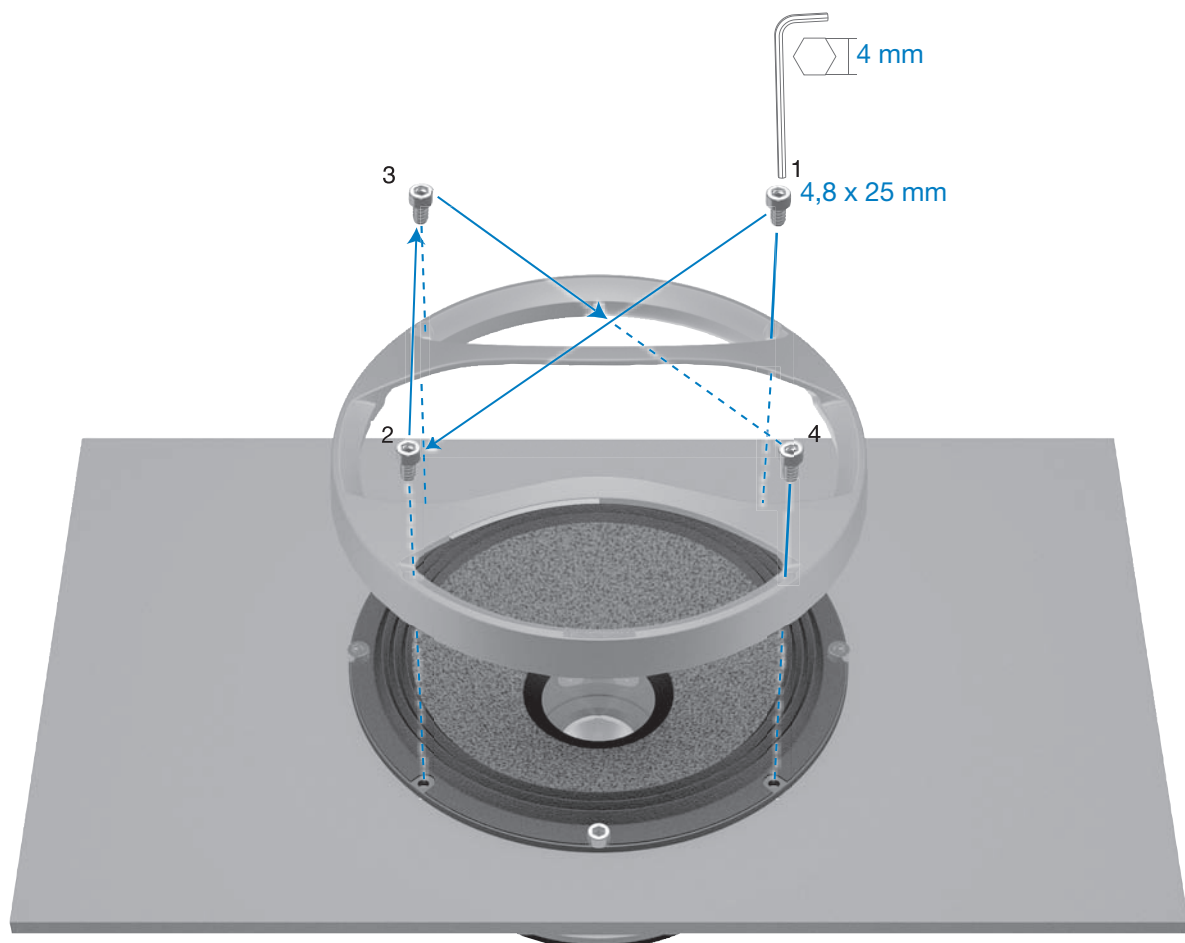
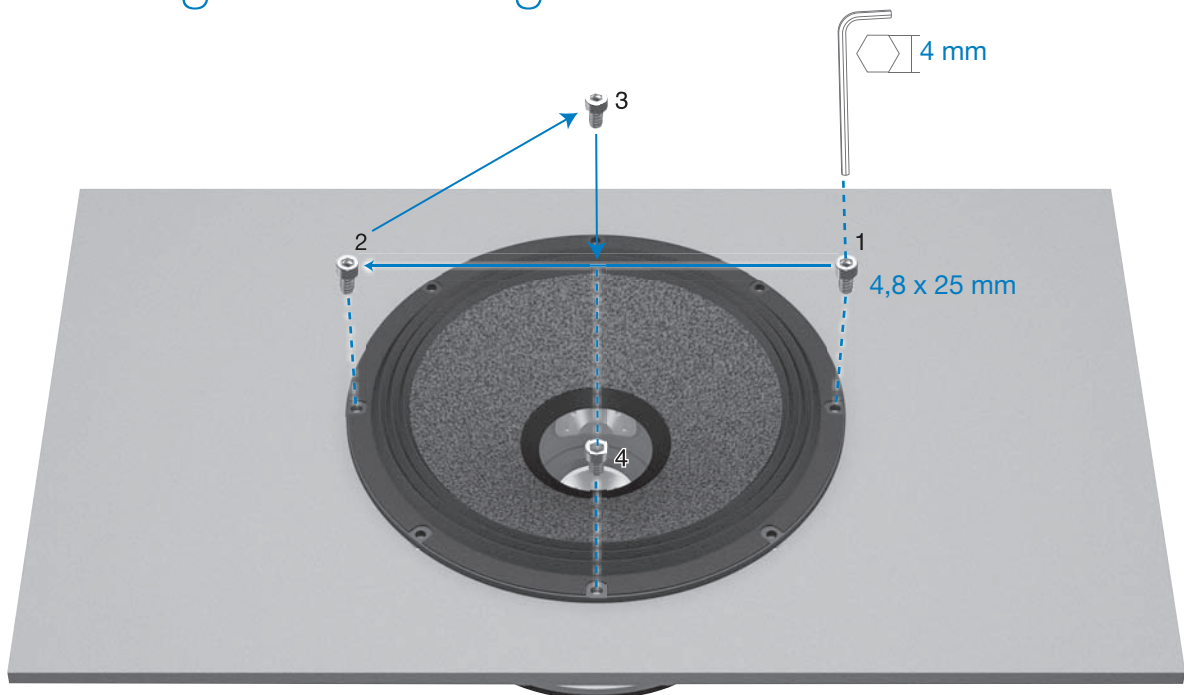
Connecting



TH 10 basso

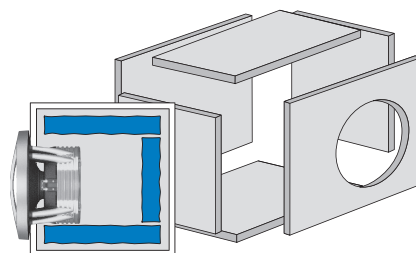


Thesis grille mounting



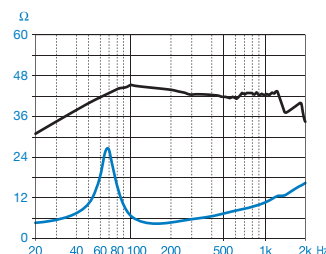
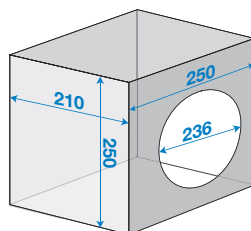
Recommended enclosure specifications

Sealed Box



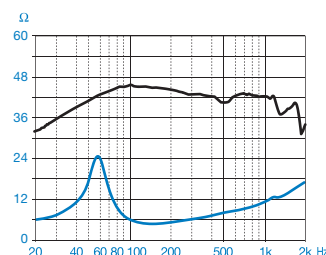
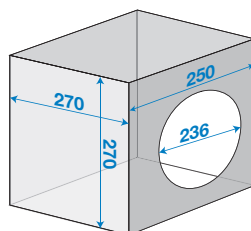
Dimension

Net Int. Volume: 13,11 l
0.463 ft³
Fc: 68 Hz

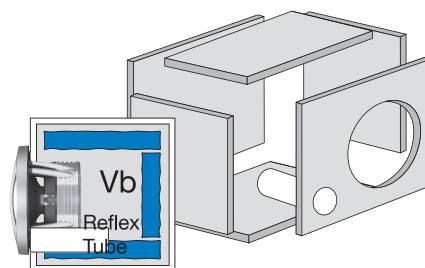


Performance

Net Int. Volume: 18,21 l
0.643 ft³
Fc: 58 Hz

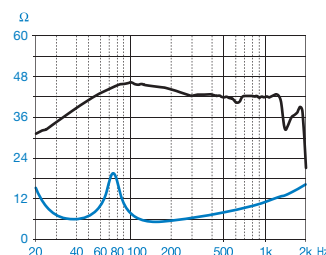
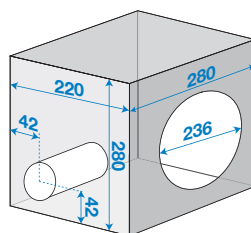


Reflex Box



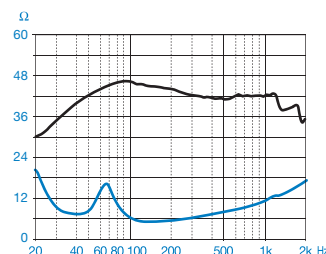
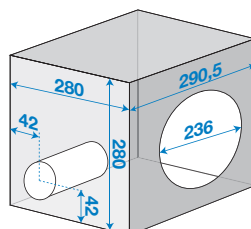
Dimension

Net Int. Volume: 17,21 l
0.608 ft³
Fb: 40 Hz
Reflex tube: Ø 3" x L 11^{7/16} or
AR 70 x 290 mm



Performance

Net Int. Volume: 23,11 l
0.816 ft³
Fb: 39 Hz
Reflex tube: Ø 3" x L 9^{1/2} or
AR 70 x 240 mm

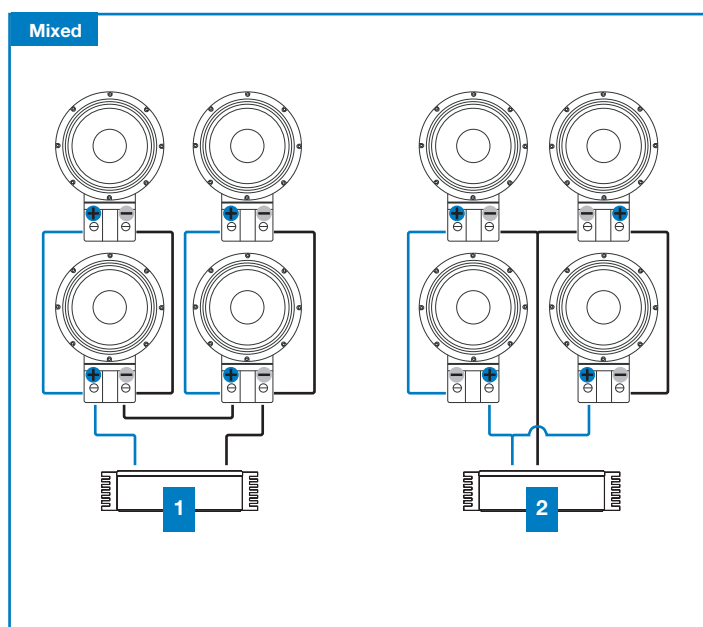
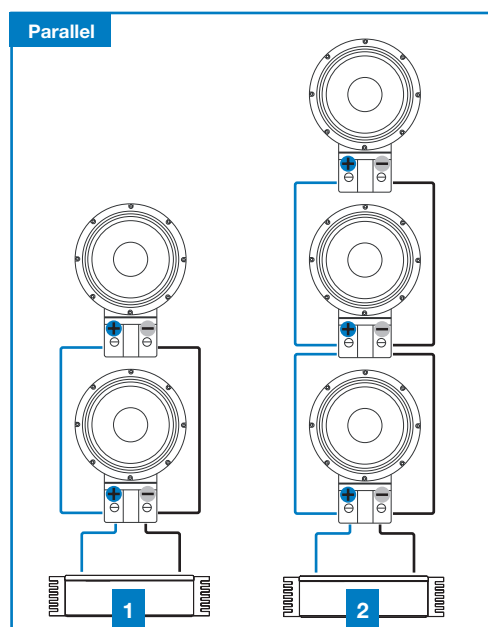
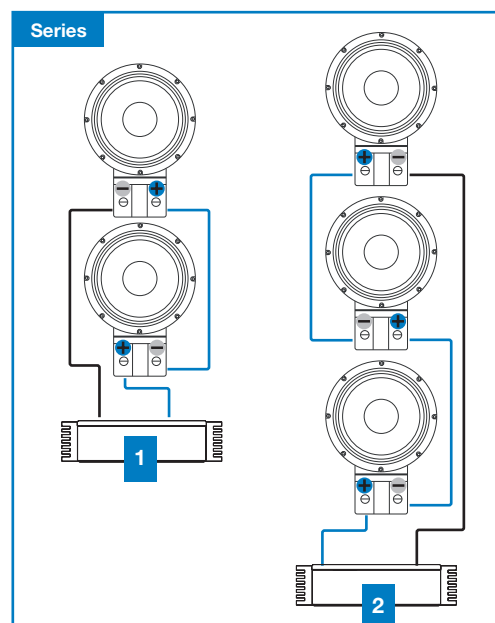
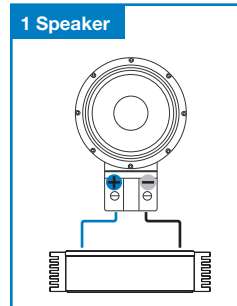


All of the dimensions shown on the illustrations are INTERNAL measurements expressed in millimetres (mm).
Use polyester damping material (like AZ audiocomp FONOFORM) and put it on all internal walls except for the speaker's baffle.



Wiring configurations

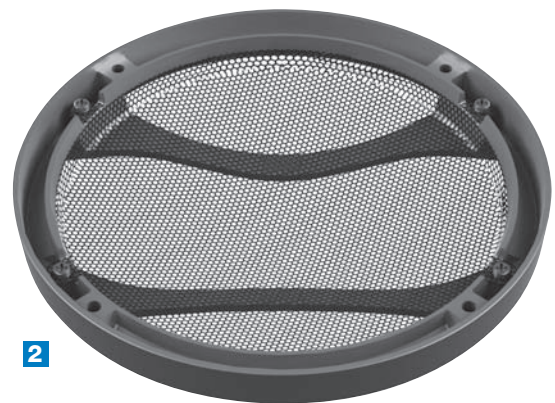
Free Air DC Resistance		TH 6.5 sax	TH 10 basso
		Ω	Ω
1 Speaker		4,50	3,50
Series	1	9,00	7,00
	2	13,50	10,50
Parallel	1	2,25	1,75
	2	1,50	1,17
Mixed	1	4,50	3,50
	2	4,50	3,50



TH 10 basso

TH 6.5 sax

Grille cosmetic options



TH 10 basso

TH 6.5 sax

TH 3.0 voce

Technical specifications

		TH 1.5 violino	TH 3.0 voce	TH 6.5 sax	TH 10 basso
Component		Tweeter	Cone Midrange	Woofer	Subwoofer
Size	mm	34 (1"1/2)	80 (3")	165 (6"1/2)	250 (10")
Power Handling	peak	180 W	100 W	300 W	1000 W
	cont. program	180W@1.8Hz-12dB Oct.	50 W	150 W	500 W
Impedance	Ω	8	8	6	4
Frequency response	Hz	1k - 22k	200 - 8k	35 - 4k	30 - 500
Sensitivity	dB/SPL	94	86	91	92
Outer diameter	mm	87,3	84	163	261
Mounting hole diameter	mm	66	73	145,5	235
Magnet size	mm	60	45	90	170
Total depth	mm	31	45	81	138
Mounting depth	mm	16	38	73	124
Total driver displacement					2,6
Weight of one component	kg	0,33	0,265	1,51	7,96
Voice coil diameter	mm	34	25	40	65
Grille			Included	Included	Included
Magnet		Neodymium REN®	Neodymium REN®	Neodymium REN®	High density flux ferrite
Cone/Dome		Tetolon Fiber®	X-pulp® + Polycrystal®	X-pulp® + Polycrystal®	X-pulp® + Polycrystal®
Surround			TWR®	TWR®	TWR®
Xmech*					18

** Xmech: massima escursione meccanica, indica il range di movimento in zona di funzionamento lineare dell'altoparlante, in entrambi i sensi.

Electro-acoustic parameters

		TH 1.5 violino	TH 3.0 voce	TH 6.5 sax	TH 10 basso
D	mm	35	65	129	215
Xmax	mm		1,5	5	10
Re	Ω	6	5,2	4,5	3,5
Fs	Hz	980	150	57	34
Le	mH@1kHz	3,43	0,51	0,78	1,57
Le	mH@10kHz	0,07	0,17	0,3	0,61
Vas	l	0,01	0,51	10,82	49,00
Mms	g	0,51	3,35	17,63	84,00
Cms	mm/N	0,052	0,33	0,45	0,26
BL	T-m	3,61	4,51	7,96	15,10
Qts		1,06	0,70	0,41	0,27
Qes		1,45	0,81	0,44	0,28
Qms		3,9	5,30	6,37	4,80
Spl (1m/2,883V)	dB	94	86	91	92

Choosing your cables

