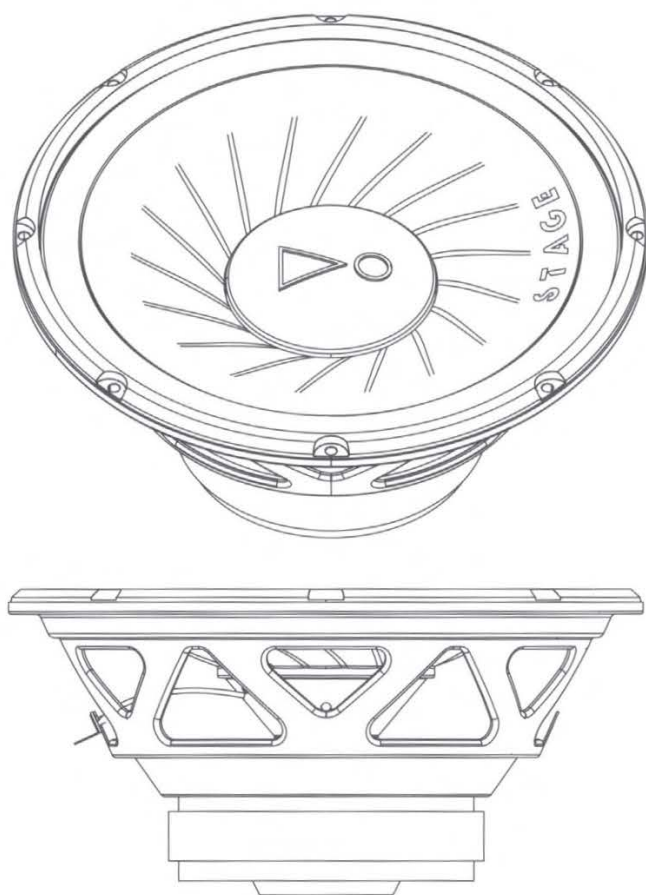




STAGE 82 / STAGE 102 / STAGE 122



Subwoofer Owner's Manual

EN

Mode d'emploi du caisson de graves

FR

Manual del propietario del subwoofer

ES

Manual do proprietário do subwoofer

PT

Manuale utente del Subwoofer

IT

Subwoofer Bedienungsanleitung

DE

Руководство пользователя сабвуфера

RU

Bruksanvisning för subwoofer

SV

Alibassokaiuttimien ohjekirja

FI

Instrukcja obsługi subwoofera

PL

Subwoofer Gebruikershandleiding

NL

Buku Panduan Pemilik Subwoofer

ID

サブウーファースの取扱説明書

JP

서브우퍼 사용 설명서

KO

低音炮用户手册

CHS

重低音喇叭擁有者手冊

TW

Betjeningsvejledning til subwoofer

DA

Subwoofer Kullanım Kılavuzu

TR





Пассивная акустическая система

Изготовитель: Харман Интернешнл Индастриз Инкорпорейтед, США, 06901 Коннектикут, г.Стэмфорд, Атлантик Стрит 400, офис 1500

Сделано в Китае

Импортер: ООО "ХАРМАН РУС СиАйЭс", Россия, 127018, г.Москва, ул. Двинцев, д.12, к. 1

Гарантийный период: 1 год

Срок службы: 3 года

Информация о сервисных центрах: www.harman.com/ru

Техническая поддержка: 8 (800) 700 0467

Организация, уполномоченная на принятие претензий потребителей: ООО "ХАРМАН РУС СиАйЭс"

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哈曼产品保修卡

机身编号

产品型号:

销售 (安装调试) 日期: 20__年__月__日

发票号码: _____ (销售者印章)

用户姓名: _____

联系电话: _____

地址 (邮编): _____

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哈曼 (中国) 投资有限公司

公司地址: 上海市黄浦区南京西路288号3004室

中国大陆地区客服热线: 400 630 6678



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产品保修期:

JBL/INFINITY汽车音响产品提供一年的保修期, 自消费者在本公司授权经销商、授权安装点购买之日 (即, 购买发票所述的日期) 起算。

扫描二维码获取全国联保

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本公司不负责任何由于汽车音响产品损坏或故障而直接或间接招致的其他损失。

产品中有害物质的名称及含量

部件名称	目标部件	有害物质或元素					
		铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
扬声器	盆架、T铁、音盆、接线端子等	○	○	○	○	○	○
附件	说明书, 包装等	○	○	○	○	○	○

本表格依据SJ/T 11364的规定编制

○: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。

×: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。



在中华人民共和国境内销售的电子电气产品上将印有“环保使用期”(EPUP) 符号。

圆圈中的数字代表产品的正常环保使用年限。



THANK YOU for choosing a JBL Stage subwoofer. These subwoofers are designed to suit a broad range of car audio applications and can be used in a wide variety of enclosure types to produce extended, powerful bass in a limited amount of vehicle space. To get the most performance from your new subwoofer, it is strongly recommended that you have a qualified professional install your subwoofer. Although this manual does provide general instructions about installing these Stage subwoofers, it does not include enclosure construction details or exact installation methods for any particular vehicle. If you do not feel that you have the necessary experience, do not attempt the installation yourself, but instead ask your authorized JBL dealer about professional installation options.

Remember to keep your sales receipt in a safe place, along with this manual, so that both are available for future reference.

WARNING

Playing loud music in a vehicle can hinder your ability to hear traffic and permanently damage your hearing. The maximum volume levels achievable by JBL speakers when combined with high-power amplification may exceed safe levels for extended listening. Using low volume levels is recommended when driving. JBL, Inc. accepts no liability for hearing loss, bodily injury, or property damage as a result of use or misuse of this product.

REPRODUCING BASS IN VEHICLES

Depending on the size of your vehicle's interior listening space, reproduced bass frequencies below 80Hz will be boosted by nearly 12dB per octave as frequency decreases. This phenomenon, known as the vehicle's transfer function (or cabin gain), plays an important role in shaping the subwoofer's frequency response in your vehicle.

SUBWOOFER ENCLOSURE TYPE S

The subwoofers are designed to perform best in moderately sized sealed enclosures, vented enclosures and prefabricated band-pass enclosures. Infinite-baffle mounting is possible, but the subwoofer's mechanical power handling will be reduced because there will be no volume of air to stiffen the subwoofer's suspension and prevent overexcursion. If you choose infinite-baffle mounting, consider the RMS and peak power-handling ratings to be half of what is listed in the specifications in this manual.

You should choose an enclosure type based on the amount of cargo space you can devote to the enclosure, the amount of power you will use to drive your subwoofer(s), and your listening habits.

SEALED ENCLOSURES

The air trapped inside a sealed enclosure is compressed when the subwoofer moves rearward and is rarefied when the subwoofer moves forward. In both cases, the air inside and outside the box will seek equilibrium by pushing and pulling on the subwoofer cone. The result is a stiffer suspension when compared to the subwoofer operating in free air. This means that the subwoofer's cone will be harder to move at low frequencies, a condition which protects the subwoofer from physical overexcursion, but requires more power than other designs to achieve a given acoustic output.

SEALED-ENCLOSURE PERFORMANCE ADVANTAGES

- The in-vehicle performance will have the flattest overall frequency response.
- The in-vehicle response will have the widest bandwidth. (Usable low-frequency response inside the vehicle will be below 20Hz.)
- An optimum sealed enclosure will always be smaller than an optimum enclosure of another type.

SEALED-ENCLOSURE PERFORMANCE TRADE-OFFS

- An optimum sealed enclosure will have lower overall efficiency than an optimum enclosure of another type.
- A subwoofer in an optimum sealed enclosure will require more amplifier power to achieve a given acoustic output than in an optimum enclosure of another type.

SEALED-ENCLOSURE CONSTRUCTION

Sealed-enclosure construction is straightforward and forgiving of errors in volume calculation, but air leaks should be avoided. Use medium-density fiberboard (MDF), glue and screws to construct the enclosure, and seal all joints with silicone caulk.

RECOMMENDATION

Subwoofers in sealed enclosures are recommended for enthusiasts who prefer accurate music reproduction and flat frequency response, for those who have a smaller space to devote to a subwoofer enclosure, and for those who have plenty of amplifier power devoted to driving the subwoofer. The sealed-enclosure design indicated in this manual represents the best compromise between low-frequency extension and flat response.

VENTED ENCLOSURES

A vented enclosure acts like a sealed enclosure at frequencies above its tuned (resonance) frequency. At resonance (which is defined by the vent), the vent produces the majority of sound — the subwoofer cone is nearly stationary while the air inside the vent vibrates. This provides greater mechanical power

handling at and above resonance, but reduced mechanical power handling below resonance. Since the subwoofer cone and voice coil don't move much at resonance, airflow across the voice coil is minimized and thermal power handling is reduced slightly at resonance.

Vented enclosures provide better efficiency in the 40Hz – 60Hz range, at the expense of sound output in the lowest octave (below 40Hz). The use of an infrasonic filter is recommended with vented enclosures. An optimum vented enclosure for a Stage subwoofer is larger than an optimum sealed enclosure.

VENTED-ENCLOSURE PERFORMANCE ADVANTAGES

- An optimum vented enclosure has greater efficiency and higher output in the 40Hz – 60Hz range than an optimum sealed enclosure.
- An optimum vented enclosure provides a greater sensation of bass than an optimum sealed enclosure.
- A subwoofer in an optimum vented enclosure will require less amplifier power to achieve a given acoustic output (down to the enclosure's resonance frequency) than in an optimum sealed enclosure.

VENTED-ENCLOSURE PERFORMANCE TRADE-OFFS

- Reduced output in the lowest octave (below 40Hz).
- Reduced mechanical power handling below the enclosure's resonance frequency. The use of an electronic infrasonic filter is strongly recommended to reduce the chance of overdriving the subwoofer below the enclosure's resonance frequency.
- An optimum vented enclosure will always be larger than an optimum sealed enclosure.

VENTED-ENCLOSURE CONSTRUCTION

Vented-enclosure construction is more difficult than the construction of a sealed enclosure. The enclosure volume and port dimensions have a specific relationship with the physical and electromechanical characteristics of the subwoofer, requiring that the recommended enclosure volume and port characteristics be strictly observed. As with sealed enclosures, use medium-density fiberboard (MDF), glue and screws to construct the enclosure, and seal all joints with silicone caulk.

RECOMMENDATION

Subwoofers in vented enclosures are recommended for enthusiasts who prefer accentuated bass response, for those who have plenty of cargo space to devote to a subwoofer enclosure and for those who will use a less powerful amplifier to drive their subwoofer. The volume and port

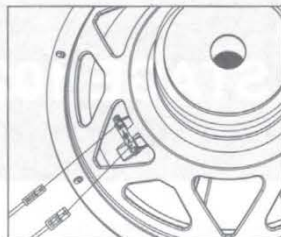
dimensions indicated must be followed precisely to ensure optimum performance.

MOUNTING THE SUBWOOFER

The subwoofers should be mounted from the outside of the enclosure. Use the included foam mounting gasket to ensure a leak-free seal between the subwoofer frame and the enclosure.

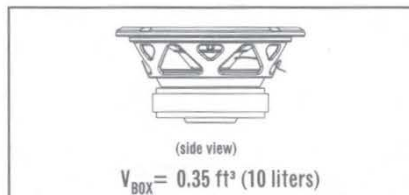
CONNECTING THE AMPLIFIER

The subwoofer connectors are compatible with bare or tinned wires. The recommended wire gauge is between 14AWG and 8AWG, depending on the length of the wire run between the amplifier and woofer. Heavier gauge wire is preferred for runs over 6' (2m).

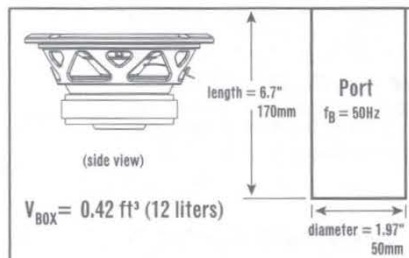


TECHNICAL DATA	STAGE 82
THIELE-SMALL PARAMETERS	4Ω
VOICE-COIL DC RESISTANCE: R_{EVC} (OHMS)	3.6
VOICE-COIL INDUCTANCE @ 1kHz: L_{EVC} (mH)	1.48
DRIVER RADIATING AREA: S_D (in ²)	32.34
S_D (cm ²)	208.67
MOTOR FORCE FACTOR: Bl (T _a)	12.00
COMPLIANCE VOLUME: V_{AS} (FT ³)	0.56
V_{AS} (LITERS)	15.9
SUSPENSION COMPLIANCE: CMS (μm/N)	0.28
MOVING MASS, AIR LOAD: MMS (GRAMS)	56.2
FREE-AIR RESONANCE: F_S (Hz)	41.6
MECHANICAL Q: QMS	5.46
ELECTRICAL Q: QES	0.37
TOTAL Q: QTS	0.35
MAGNETIC-GAP HEIGHT: H_{AG} (in)	0.31
H_{AG} (mm)	8.00
VOICE-COIL HEIGHT: H_{VC} (in)	0.8
H_{VC} (mm)	20.3
MAXIMUM EXCURSION: X_{MAX} (in)	0.24
X_{MAX} (mm)	6.15

SEALED-BOX VOLUME (INCLUDES DRIVER DISPLACEMENT)

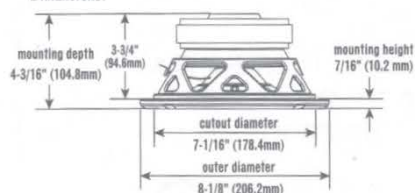


VENTED-BOX VOLUME (INCLUDES DRIVER/PORT DISPLACEMENTS)



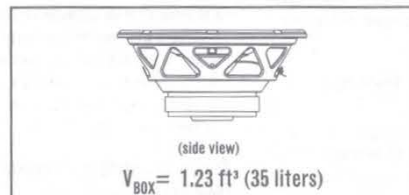
SPECIFICATIONS

DIAMETER:	8" (200mm)
SENSITIVITY (2.83V @ 1m):	88dB
POWER HANDLING:	200 Wrms (800W PEAK)
FREQUENCY RESPONSE:	38Hz ~ 200Hz
NOMINAL IMPEDANCE:	4 OHMS
VOICE-COIL DIAMETER:	1.5" (38.8mm)
DIMENSIONS:	

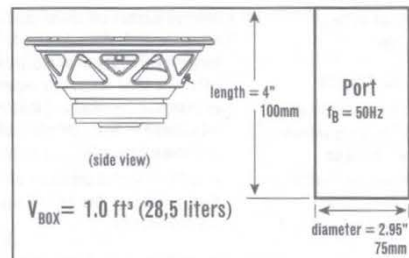


TECHNICAL DATA	STAGE 102
THIELE-SMALL PARAMETERS	4Ω
VOICE-COIL DC RESISTANCE: R_{EVC} (OHMS)	3.6
VOICE-COIL INDUCTANCE @ 1kHz: L_{EVC} (mH)	1.5
DRIVER RADIATING AREA: S_D (in ²)	56.79
S_D (cm ²)	366.44
MOTOR FORCE FACTOR: Bl (T _a)	12.4
COMPLIANCE VOLUME: V_{AS} (FT ³)	1.46
V_{AS} (LITERS)	41.5
SUSPENSION COMPLIANCE: CMS (μm/N)	0.22
MOVING MASS, AIR LOAD: MMS (GRAMS)	83.3
FREE-AIR RESONANCE: F_S (Hz)	37.1
MECHANICAL Q: QMS	5.92
ELECTRICAL Q: QES	0.46
TOTAL Q: QTS	0.42
MAGNETIC-GAP HEIGHT: H_{AG} (in)	0.31
H_{AG} (mm)	8.00
VOICE-COIL HEIGHT: H_{VC} (in)	0.8
H_{VC} (mm)	20.3
MAXIMUM EXCURSION: X_{MAX} (in)	0.24
X_{MAX} (mm)	6.15

SEALED-BOX VOLUME (INCLUDES DRIVER DISPLACEMENT)

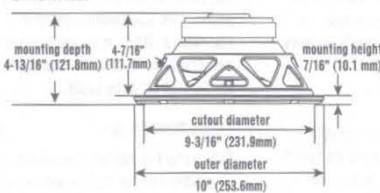


VENTED-BOX VOLUME (INCLUDES DRIVER/PORT DISPLACEMENTS)



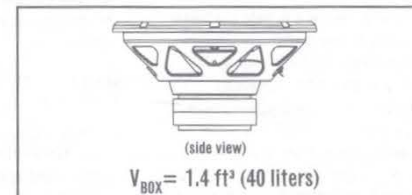
SPECIFICATIONS

DIAMETER:	10" (250mm)
SENSITIVITY (2.83V @ 1m):	89dB
POWER HANDLING:	225 Wrms (900W PEAK)
FREQUENCY RESPONSE:	35Hz ~ 200Hz
NOMINAL IMPEDANCE:	4 OHMS
VOICE-COIL DIAMETER:	1.5" (38.8mm)
DIMENSIONS:	

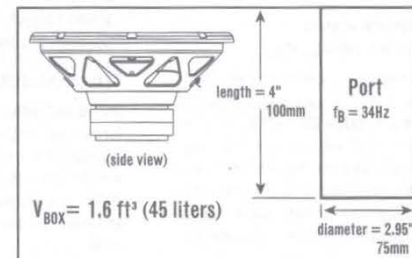


TECHNICAL DATA	STAGE 122
THIELE-SMALL PARAMETERS	4Ω
VOICE-COIL DC RESISTANCE: R_{EVC} (OHMS)	3.6
VOICE-COIL INDUCTANCE @ 1kHz: L_{EVC} (mH)	2.3
DRIVER RADIATING AREA: S_D (in ²)	82.29
S_D (cm ²)	530.93
MOTOR FORCE FACTOR: Bl (T _a)	13.6
COMPLIANCE VOLUME: V_{AS} (FT ³)	2.28
V_{AS} (LITERS)	64.6
SUSPENSION COMPLIANCE: CMS (μm/N)	0.16
MOVING MASS, AIR LOAD: MMS (GRAMS)	154.3
FREE-AIR RESONANCE: F_S (Hz)	31.7
MECHANICAL Q: QMS	6.64
ELECTRICAL Q: QES	0.6
TOTAL Q: QTS	0.55
MAGNETIC-GAP HEIGHT: H_{AG} (in)	0.31
H_{AG} (mm)	8.00
VOICE-COIL HEIGHT: H_{VC} (in)	1.21
H_{VC} (mm)	30.7
MAXIMUM EXCURSION: X_{MAX} (in)	0.45
X_{MAX} (mm)	11.35

SEALED-BOX VOLUME (INCLUDES DRIVER DISPLACEMENT)

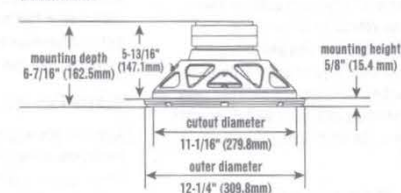


VENTED-BOX VOLUME (INCLUDES DRIVER/PORT DISPLACEMENTS)



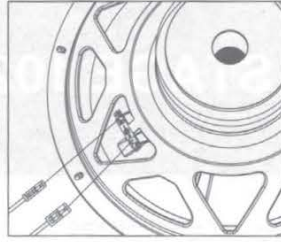
SPECIFICATIONS

DIAMETER:	12" (300mm)
SENSITIVITY (2.83V @ 1m):	91dB
POWER HANDLING:	250 Wrms (1000W PEAK)
FREQUENCY RESPONSE:	34Hz ~ 200Hz
NOMINAL IMPEDANCE:	4 OHMS
VOICE-COIL DIAMETER:	2" (50.8mm)
DIMENSIONS:	



AMPLİFİKATÖRÜ BAĞLAMA

Subwoofer konektörler çıplak veya kalaylı teller ile uyumludur. Amplifikatör ve woofer arasında çekilen tel uzunluğuna bağlı olarak, tavsiye edilen tel çapı 14 AWG ile 8AWG arasındadır. Daha kalın ölçüde tel 6'(2m) üzerinde çekilenler için tercih edilir.



TEKNİK VERİ STAGE 82

THİELE KÜÇÜK PARAMETRELERİ	40
SES BOBİNİ DC DİRENCİ:	Revc (OHMS) 3.6
1KHZ'DE SES BOBİNİ İNDÜKTANSI:	Levc (MH) 1.48
SÜRÜCÜ YAYILMA ALANI:	Sd (m²) 32.34
	Sd (cm²) 208.67
MOTOR GÜCÜ FAKTÖRÜ:	Bl (Ta) 12.00
UYUM HACMİ:	Vas (ft³) 0.56
	Vas (LITERS) 15.9
SÜSPANSİYON UYUMU:	Cms (µm/N) 0.26
HAREKETLİ KÜTLE, HAVA YÜKÜ:	Mms (GRAMS) 56.2
SERBEST HAVA REZONANSI:	Fs (Hz) 41.6
MEKANİK Q:	Qms 5.46
ELEKTRİKSEL Q:	Qes 0.37
TOPLAM Q:	Qts 0.35
MANYETİK BOŞLUK YÜKSEKLİĞİ:	Hag (in) 0.31
	Hag (mm) 8.00
SES BOBİNİ YÜKSEKLİĞİ:	Hvc (in) 0.8
	Hvc (mm) 20.3
MAKSİMUM GEZİNİM:	Xmax (in) 0.24
	Xmax (mm) 6.15

TEKNİK VERİ STAGE 102

THİELE KÜÇÜK PARAMETRELERİ	40
SES BOBİNİ DC DİRENCİ:	Revc (OHMS) 3.6
1KHZ'DE SES BOBİNİ İNDÜKTANSI:	Levc (MH) 1.5
SÜRÜCÜ YAYILMA ALANI:	Sd (m²) 56.79
	Sd (cm²) 366.44
MOTOR GÜCÜ FAKTÖRÜ:	Bl (Ta) 12.4
UYUM HACMİ:	Vas (ft³) 1.46
	Vas (LITERS) 41.5
SÜSPANSİYON UYUMU:	Cms (µm/N) 0.22
HAREKETLİ KÜTLE, HAVA YÜKÜ:	Mms (GRAMS) 83.3
SERBEST HAVA REZONANSI:	Fs (Hz) 37.1
MEKANİK Q:	Qms 5.92
ELEKTRİKSEL Q:	Qes 0.46
TOPLAM Q:	Qts 0.42
MANYETİK BOŞLUK YÜKSEKLİĞİ:	Hag (in) 0.31
	Hag (mm) 8.00
SES BOBİNİ YÜKSEKLİĞİ:	Hvc (in) 0.8
	Hvc (mm) 20.3
MAKSİMUM GEZİNİM:	Xmax (in) 0.24
	Xmax (mm) 6.15

TEKNİK VERİ STAGE 122

THİELE KÜÇÜK PARAMETRELERİ	40
SES BOBİNİ DC DİRENCİ:	Revc (OHMS) 3.6
1KHZ'DE SES BOBİNİ İNDÜKTANSI:	Levc (MH) 2.3
SÜRÜCÜ YAYILMA ALANI:	Sd (m²) 82.29
	Sd (cm²) 530.93
MOTOR GÜCÜ FAKTÖRÜ:	Bl (Ta) 13.6
UYUM HACMİ:	Vas (ft³) 2.28
	Vas (LITERS) 64.6
SÜSPANSİYON UYUMU:	Cms (µm/N) 0.16
HAREKETLİ KÜTLE, HAVA YÜKÜ:	Mms (GRAMS) 154.3
SERBEST HAVA REZONANSI:	Fs (Hz) 31.7
MEKANİK Q:	Qms 6.64
ELEKTRİKSEL Q:	Qes 0.6
TOPLAM Q:	Qts 0.55
MANYETİK BOŞLUK YÜKSEKLİĞİ:	Hag (in) 0.31
	Hag (mm) 8.00
SES BOBİNİ YÜKSEKLİĞİ:	Hvc (in) 1.21
	Hvc (mm) 30.7
MAKSİMUM GEZİNİM:	Xmax (in) 0.45
	Xmax (mm) 11.35

KAPALI KUTU HACMİ (SÜRÜCÜ DEPLASMANI DÂHİL)



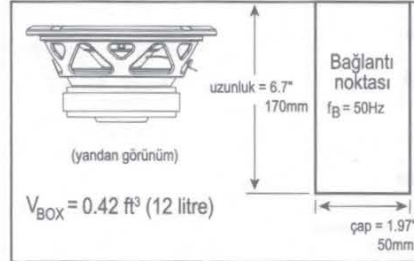
KAPALI KUTU HACMİ (SÜRÜCÜ DEPLASMANI DÂHİL)



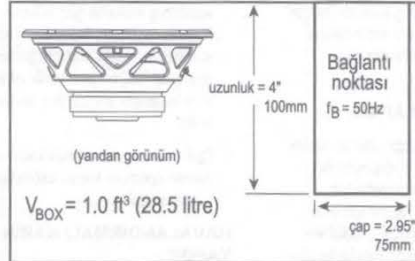
KAPALI KUTU HACMİ (SÜRÜCÜ DEPLASMANI DÂHİL)



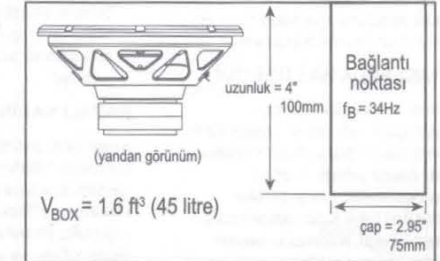
HAVALANDIRMALI KUTU HACMİ (SÜRÜCÜ/BAĞLANTI NOKTASI DEPLASMANI DÂHİL)



HAVALANDIRMALI KUTU HACMİ (SÜRÜCÜ/BAĞLANTI NOKTASI DEPLASMANI DÂHİL)

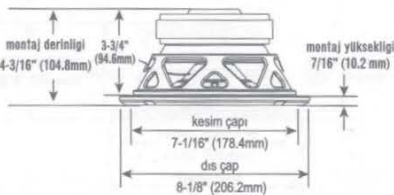


HAVALANDIRMALI KUTU HACMİ (SÜRÜCÜ/BAĞLANTI NOKTASI DEPLASMANI DÂHİL)



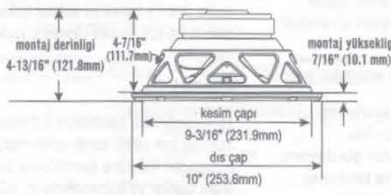
TEKNİK ÖZELLİKLER

ÇAP:	8" (200MM)
HASSASİYET (M'DE 2,83V):	88dB
GÜÇ KULLANMA:	200 Wrms (800W TEPE)
FREKANS YANITI:	38Hz ~ 200Hz
NOMİNAL EMPEDANS:	4 OHM
SES BOBİNİ ÇAPİ:	1.5" (38.8MM)
BOYUTLAR:	



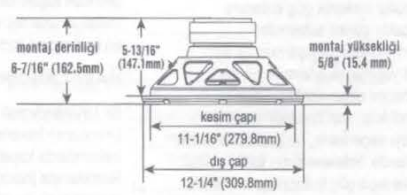
TEKNİK ÖZELLİKLER

ÇAP:	10" (250MM)
HASSASİYET (M'DE 2,83V):	89dB
GÜÇ KULLANMA:	225 Wrms (900W TEPE)
FREKANS YANITI:	35Hz ~ 200Hz
NOMİNAL EMPEDANS:	4 OHM
SES BOBİNİ ÇAPİ:	1.5" (38.8MM)
BOYUTLAR:	



TEKNİK ÖZELLİKLER

ÇAP:	12" (300MM)
HASSASİYET (M'DE 2,83V):	91dB
GÜÇ KULLANMA:	250 Wrms (1000W TEPE)
FREKANS YANITI:	34Hz ~ 200Hz
NOMİNAL EMPEDANS:	4 OHM
SES BOBİNİ ÇAPİ:	2" (50.8MM)
BOYUTLAR:	



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