

**Pioneer**

# TS-W303R

# TS-W253R

**1200W<sub>MAX.</sub>/NOM. 250W**  
**1000W<sub>MAX.</sub>/NOM. 200W**

**CAR-USE COMPONENT SUBWOOFER**  
**HP D'EXTREME-GRAVE AUTOMOBILE**  
**SUBWOOFER PARA AUTOMÓVIL**

Be sure to read this instruction manual before installing this speaker.

Prière de lire obligatoirement ce manuel d'installation avant de monter les haut-parleurs.

## ⚠ WARNING



Dear Customer:

Your purchase of Pioneer equipment is only the beginning of your musical enjoyment. Pioneer and the Consumer Electronics Association want you to get the most out of your equipment by using it at a safe sound level; a level that lets the sound come through clearly without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Set your equipment at a safe level BEFORE your hearing adapts.

To establish a safer level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.
- Taking a minute to do this now will help to preserve hearing.

## ⚠ CAUTION

To prevent damage to your speakers please observe the following caution. At high volume levels if the music sounds distorted or additional sounds are perceived lower the volume. This may be caused by excessive input to the speakers. The sound you are hearing could be the speaker cone becoming out of control or it may be the voice coil actually coming into contact with the magnetic assembly. Under these circumstances, it is prudent to lower the volume to just below the point where these phenomena occur. If your amplifier has a gain control it would be advisable to lower this control slightly to prevent this from reoccurring. In some cases, if there is an equalizer in the system, the bass control on this unit could also be readjusted to prevent this from happening. If higher volume or sound pressure levels (spl) than those which the speaker can reproduce are desired, it is recommended that additional speakers be added to the system. By doing so it is possible to gain significant increases in sound pressure levels. In some cases, you may double the perceived system output without any deterioration in sound quality. When installing the speakers, or after installation make sure not to subject the diaphragms to direct shock (for example, dropping sharp-edged objects onto them) as the speakers may be damaged. Since this speaker is continuously used being turned on full blast, temperature of the magnetic circuit rises, avoid touching it directly by hand and placing something near it. If it is heated, it may cause a burn, deformation of or damage to peripheral things. If this speaker is used as it is mounted on a cabinet whose volume is larger than the recommended size or used alone in a free air, it will not only be deteriorated in durability but also be out of order.

Pioneer recommends that this speaker be used in conjunction with amplifiers whose continuous (RMS) output is lower than the nominal input power of this speaker.

## WARNING

Handling the cord on this product or cords associated with accessories sold with the product will expose you to chemicals listed on proposition 65 known to the State of California and other governmental entities to cause cancer and birth defect or other reproductive harm.

*Wash hands after handling.*

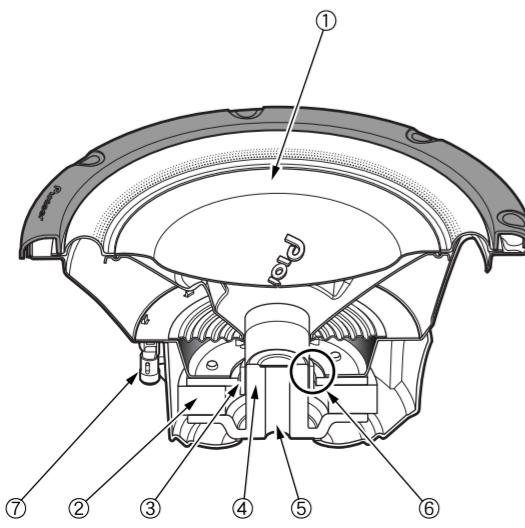
## ● DESIGNED FOR ENCLOSURE USE

C series subwoofers are designed to provide optimum bass performance when used in a speaker enclosure with appropriate internal volume. If the internal volume of the enclosure is smaller than the recommended size, the speaker will not be able to reproduce frequencies as low as that of the recommended enclosure. If the internal volume of the enclosure is larger than what is recommended, it will adversely affect the frequency response characteristics and performance of the speaker. This is commonly referred to as under-damped alignment. Over excursion of the subwoofer may result. Pioneer recommends the speaker enclosure be manufactured with 3/4" MDF particle board. Always glue and screw the enclosure together to ensure it is correctly sealed. Whenever possible seal all edges with silicone caulk as well. Pioneer recommends that the inner wall of the enclosure be covered with a sound-absorbing material to provide better sound quality. These suggestions should be followed when building a ported enclosure as well.

If this product is used in free-air conditions (without an enclosure), insufficient damping causes the sound without accuracy and reduces the power handling capability to 1/4 of its usual levels. It may result in permanent damage to the product.

## ● FEATURES

1. IMP™ COMPOSITE SEAMLESS CONE : with its appropriate inner loss to reduce distortion, reproduces rich bass sound.
2. LARGE STRONTIUM MAGNET : produces loud & tight bass response.
3. 6-LAYER, LONG VOICE COIL DESIGN : High power and long excursion capability for deeper, louder, more impactful bass.
4. EXTENDED POLE YOKE : Greatly improves linearity during large excursions by expanding the magnetic field.
5. VENTED POLE YOKE : allows for better heat dissipation and increased power handling.
6. EXTENDED EXCURSION DESIGN : Provides longer travel (excursion) to create seriously loud bass.
7. LARGE BINDING POSTS : allow to connect with heavy gauge wire for powerful bass.
8. BEST TUNED PARAMETERS : CAD computer simulations were used to achieve powerful bass performance, superb sound quality and extreme reliability.



## ● CONÇU POUR CAISSON

Les subwoofers série C sont conçus pour fournir des performances optimum des graves lorsqu'ils sont utilisés avec un coffret de haut-parleur de volume interne approprié. Si le volume interne de caisson est inférieur à la taille recommandée, le haut-parleur ne pourra pas reproduire des fréquences aussi basses que celles de l'enceinte recommandée. Si le volume interne de caisson est supérieur à celui recommandé, cela affectera les caractéristiques de réponse en fréquence et les performances du haut-parleur. Cela est communément appelé alignment sous-amorti. Une surexcurssion du subwoofer peut en résulter. Pioneer recommande que le coffret du haut-parleur soit fait de panneau d'aggloméré MDF de 21 mm. Toujours coller et visser le coffret pour garantir qu'il est correctement scellé. Si possible, sceller également tous les bords par colmatage au silicone. Il est préférable que la cloison interne de l'enceinte soit recouverte d'un matériau insonorisant afin d'obtenir une meilleure qualité acoustique. Ces suggestions doivent être aussi suivies lors de la construction d'un coffret ouvert.

Ce type de haut-parleurs est prévu de fonctionner uniquement en clos (caisson), en raison de sa suspension spécifique. Sinon la qualité sonore sera affectée et sa puissance réduite de trois quarts en pression acoustique (SPL). Si la condition ci-dessus n'est pas prise en compte le haut-parleur pourrait subir des dégâts non réversibles.

## ● CARACTÉRISTIQUES

1. CÔNE COMPOSÉ IMP™ SANS Soudure : avec une perte interne optimisée pour réduire les distorsions afin de reproduire toute la richesse de l'extrême-grave.
2. LA GRANDE AIMANT EN STRONTIUM : produire une réponse des basses forte et puissante.
3. BOBINE MOBILE LONGUE, À 6 COUCHES : Puissance élevée et course étendue donnant des basses plus profondes, plus fortes et plus puissantes.
4. LA PIECE POLAIRE ALLONGÉE : avec sa capacité d'élargir le champ magnétique, assure une meilleure linéarité de rendement aux niveaux d'entrée élevée.
5. LA CULASSE À PÔLES À PRISES D'AIR : permet une circulation d'air dans le circuit magnétique pour assurer une meilleure dissipation de chaleur.
6. CONCEPTION À COURSE LONGUE : est désigné pour permettre à la résistance d'entrée d'atteindre une plus grande linéarité de rendement.
7. GROSSES PINCES DE COURANT : permet de connecter avec des fils de gros calibre pour des basses puissantes.
8. LES PARAMÈTRES LES MIEUX ACCORDÉS : grâce aux simulations par ordinateur aident à apporter une réponse riche dans les basses avec une superbe définition.

## ● SPECIFICATIONS ● CARACTÉRISTIQUES ● ESPECIFICACIONES

Model Modèle Modelo	Size Taille Tamaño	Nominal power Puissance nominale Potencia nominal	Max.music power Puissance musicale maximum Máxima potencia de musica	Nominal impedance Impédance nominale Impedancia nominal	Sensitivity Sensibilité Sensibilidad	Frequency response Bande passante Respuesta de frecuencia	Magnet weight Poids aimant Peso del imán	Displacement Déplacement Desplazamiento
TS-W303R	12" (30 cm)	250 W	1200 W	4 Ω	95 dB ± 1.5 dB (in car, input : 1 W)	20 Hz To 180 Hz (-20 dB in car, input : 1 W)	920 g (32 oz)	0.059 cu.ft 1.66 liters
TS-W253R	10" (25 cm)	200 W	1000 W	4 Ω	93 dB ± 1.5 dB (in car, input : 1 W)	20 Hz To 180 Hz (-20 dB in car, input : 1 W)	920 g (32 oz)	0.047 cu.ft 1.33 liters

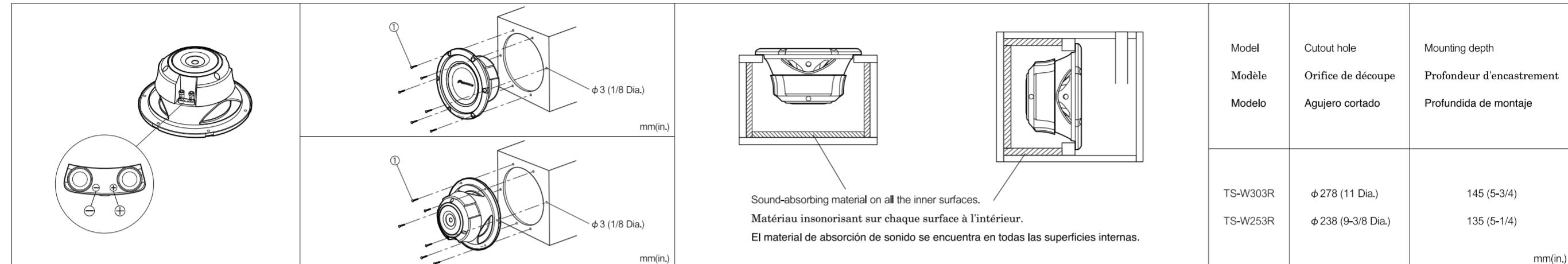
Model Modèle Modelo	Revc (Ω)	Levc (mH)	Fs (Hz)	Qms	Qes	Qts	Vas (cu.ft) (liters)	Rms (N.S/m)	Mms	Cms (m/N)	Diam (inch) (mm)	BL (T.m)	Xmax (inch) (mm)
TS-W303R	3.0	3.23	29.1	3.94	0.76	0.64	3.048 86.260	6.126	159.43	2.7 × 10⁻⁴	9.6 245	11.37	0.23 5.9
TS-W253R	3.0	3.16	32.8	3.52	0.47	0.42	2.090 59.160	5.426	123.23	3.5 × 10⁻⁴	8.3 210	11.02	0.23 5.9

● RECOMMENDED ENCLOSURE VOLUMES / PORT SIZES ● CONCEPTION POUR CAISSON / EVENT ● VOLÚMENES DE LA CAJA / TAMAÑOS DE LAS PUERTAS RECOMENDADOS

	For sealed Enclosure Pour caisson clos Para la caja sellada	For Ported Enclosure Pour caisson transféré Para la caja puerta	For Bandpass Enclosure Pour caisson passe-bande Para la caja pasabanda
RECOMMENDATION RECOMMANDATION RECOMENDACIÓN	Ⓐ TS-W303R 1.25 cu.ft (35.4 liters) TS-W253R 0.8 cu.ft (22.6 liters)	Ⓑ TS-W303R 1.5 cu.ft (42.5 liters) TS-W253R 1.0 cu.ft (28.3 liters) Ⓒ 3"Dia.(ø76 mm) × 6.5" (165 mm) 3"Dia.(ø76 mm) × 7.5" (191 mm)	Ⓓ TS-W303R 0.9 cu.ft (25.5 liters) TS-W253R 0.6 cu.ft (17.0 liters) Ⓔ 0.9 cu.ft (25.5 liters) 0.6 cu.ft (17.0 liters) Ⓕ 3"Dia.(ø76 mm) × 4.5" (114 mm) 3"Dia.(ø76 mm) × 6.5" (165 mm)
MAXIMUM MÁXIMA	Ⓐ TS-W303R 1.75 cu.ft (49.5 liters) TS-W253R 1.25 cu.ft (35.4 liters)	Ⓑ TS-W303R 2.0 cu.ft (56.6 liters) TS-W253R 1.5 cu.ft (42.5 liters) Ⓒ 3"Dia.(ø76 mm) × 3.5" (90 mm) 3"Dia.(ø76 mm) × 4.5" (114 mm)	Ⓓ TS-W303R 1.1 cu.ft (31.1 liters) TS-W253R 0.8 cu.ft (22.6 liters) Ⓔ 1.1 cu.ft (31.1 liters) 0.8 cu.ft (22.6 liters) Ⓕ 3"Dia.(ø76 mm) × 3" (76 mm) 3"Dia.(ø76 mm) × 4.5" (114 mm)
MINIMUM MINIMUM MINIMA	Ⓐ TS-W303R 0.85 cu.ft (24.1 liters) TS-W253R 0.65 cu.ft (18.4 liters)	Ⓑ TS-W303R 1.0 cu.ft (28.3 liters) TS-W253R 0.75 cu.ft (21.2 liters) Ⓒ 3"Dia.(ø76 mm) × 8.5" (216 mm) 3"Dia.(ø76 mm) × 9.5" (241 mm)	Ⓓ TS-W303R 0.7 cu.ft (19.8 liters) TS-W253R 0.45 cu.ft (12.7 liters) Ⓔ 0.7 cu.ft (19.8 liters) 0.45 cu.ft (12.7 liters) Ⓕ 3"Dia.(ø76 mm) × 6.5" (165 mm) 3"Dia.(ø76 mm) × 9.5" (241 mm)

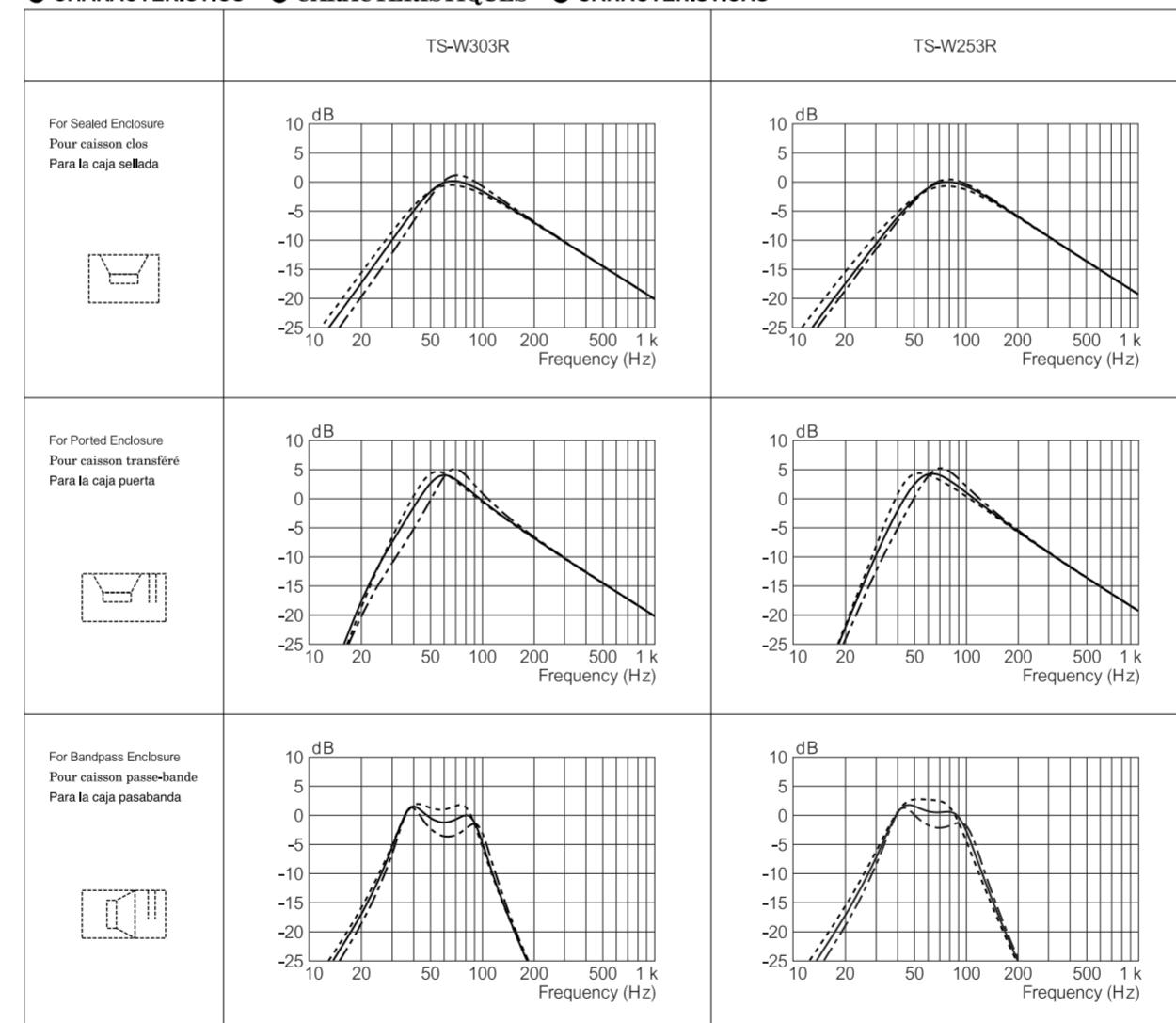
The recommended enclosure volumes include speaker displacement. Les volumes de caisson recommandé comprennent le déplacement HP. Los volúmenes enclaustrados recomendados incluyen el desplazamiento del altoparlante.

● HOW TO INSTALL ● MODE D'INSTALLATION ● INSTALACION



● TEMPLATE  
● CALIBRE  
● PLANTILLA

● CHARACTERISTICS ● CARACTÉRISTIQUES ● CARACTERÍSTICAS



RECOMMENDED ENCLOSURE VOLUME VOLUME RECOMMANDÉ DU CAISSON DE L'ENCEINTE  
VOLUMEN DE LA CAJA RECOMENDADO  
MAXIMUM ENCLOSURE VOLUME VOLUME MAXIMUM DU CAISSON DE L'ENCEINTE  
VOLUMEN MÁXIMO DE LA CAJA  
MINIMUM ENCLOSURE VOLUME VOLUME MINIMUM DU CAISSON DE L'ENCEINTE  
VOLUMEN MÍNIMO DE LA CAJA

● PARTS INCLUDED  
● PIÈCES COMPRISSES  
● PIEZAS INCLUIDAS



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