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Congratulations and thank you.....

for choosing *PrecisionPower* audio equipment. At *PrecisionPower* we proudly design, engineer and manufacture audio products at our facility in Phoenix, Arizona. Our award winning engineering team utilizes innovative technology to consistently deliver Absolutely State of the Art™ performance, sound quality, reliability, and value. This *PrecisionPower* product reflects our commitment to offer you unparalleled versatility and quality for years of dependable service and listening enjoyment.

Service



Do not attempt to service *PrecisionPower* products yourself. Performing exploratory surgery on your audio equipment yourself will void the warranty. Many parts of your *PrecisionPower* gear are custom built to our specifications. Our factory parts are not made available to anyone else nor are they for sale. Our goal is to make sure that your *PrecisionPower* product will always sound as good as the day it was purchased. Contact your authorized *PrecisionPower* dealer about obtaining any warranty service through *PrecisionPower*.(See Warranty inside back cover)

FOR YOUR RECORDS:

M o d e l _____

Serial Number _____

Purchase Date _____

Caution!



The extended use of a high powered audio system may result in hearing loss or damage. While *PrecisionPower* systems are capable of "Concert Level" volumes with incredible accuracy, they are also designed for you to enjoy at more reasonable levels all of the sonic subtleties created by musicians. Please observe all local sound ordinances.

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INTRODUCTION

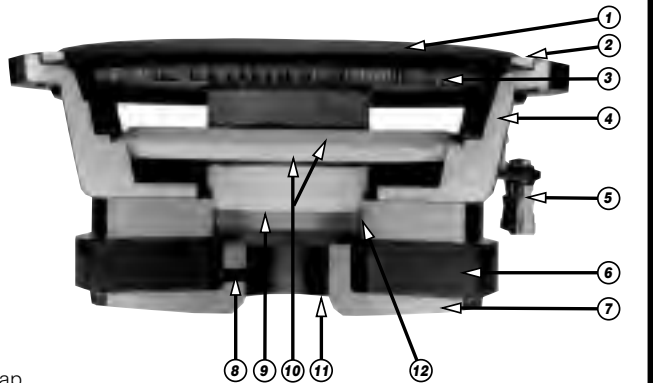
Your new **PowerClass PRO** Flat Piston subwoofer is part of an exciting line of loudspeakers, **PRO8**, **PRO10** and **PRO12**, which represent the extraordinary design achievements of the **PrecisionPower** Engineering Team. The **PPI PowerClass PRO** Flat Piston subwoofers have been engineered from the ground up and are constructed at our factory in Phoenix from the finest materials available. Like all **PPI** products, they reflect our commitment to “*Absolutely State of the Art*” performance and flawless sonic quality.

The **PRO8** subwoofer incorporates a 2” voice coil, while the **PRO10** and **PRO12** incorporate a 3” voice coil. Both the 2” and 3” voice coils are edge wound onto Nomex reinforced Kapton formers, and are available in 4Ω and 8Ω versions. The voice coils are cooled and given increased mechanical damping through the use of a ferrofluid filled magnetic gap. The cooling, and therefore power handling, is further enhanced by virtue of the inverted coil geometry, together with a vented pole piece, spiders, and magnet cavity. The use of an inverted coil geometry results in a substantial reduction of distortion over conventional loudspeaker systems. Increased linearity over a large excursion is obtained by using dual matched rear suspension components together with the finest quality rubber roll surround.

The most unique feature is the use of a flat diaphragm instead of a conical structure. The diaphragm is constructed from a combination of state of the art materials which include carbon fiber and Nomex honeycomb. The result is a diaphragm that is exceptionally stiff and lightweight which does not exhibit cone flex distortion or the buckling effects inherent in conventional designs. Additionally, **PrecisionPower's** exclusive cast basket design is extremely rigid which ultimately removes any unwanted distortion due to resonance and flexing.

Included in this manual are a number of sample enclosure drawings. They are by no means the only enclosures to use, but rather a starting point in the right direction. To determine the correct enclosure for your needs many factors need to be addressed (amount of power, vehicle, placement, crossover, etc.) Therefore, as always, **PrecisionPower** recommends that your subwoofer be installed by an **Authorized PrecisionPower Dealer**.

1. Rubber roll surround
2. Aluminum trim ring
3. Carbon fiber/Nomex honeycomb diaphragm
4. Cast aluminum basket
5. Gold plated, heavy duty terminal posts
6. Magnet structure
7. Forged steel back plate
8. Magnet cavity vent
9. edge wound voice coil/
Kapton former
10. Dual spiders
11. Vented pole piece
12. Ferrofluid filled magnetic gap



SEALED ENCLOSURE

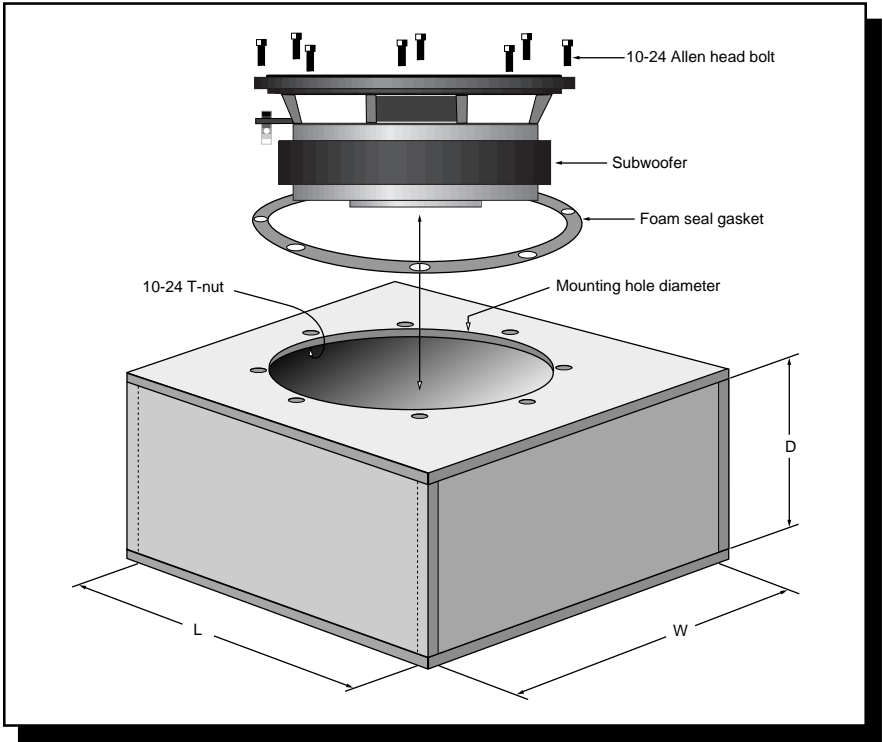
Building A Sealed Enclosure:



1. Build a sealed box with specified dimensions of L x W x D per drawing. (See chart for suggested box sizes) Use 3/4" thick material (preferably medium density fiber board or equivalent) for box construction. Be sure to use wood glue and silicone to ensure your enclosure is sealed properly, as air leaks will affect the performance of a subwoofer. (The use of an air stapler will help to achieve the nicest results for constructing the enclosure.)
2. Using the supplied template, trace the circle template and mounting hole pattern for your *PrecisionPower* subwoofer on the appropriate side of the box. (See diagram)
3. Cut the speaker hole from the face of the box with a router. Use a guide or template whenever possible for a clean, accurate job; use a jig saw only if a router is not available. Drill out the holes for the T-nuts with a 7/32" drill bit.
4. Place the woofer in the opening which you have cut into the box to check the fit. Make sure that the T-nut holes line-up.
5. Install the 10-24 T-nuts (supplied) into the 7/32" holes from the backside of the face board.
6. Run an appropriate length of wire into the box, leaving enough length to comfortably install the wires to the terminals on the woofer before placing the speaker into its mounting hole. Use a terminal cup whenever possible.
7. Vacuum out any shavings and dust that could find it's way into your woofer from the inside of the box. Fill the box with polyester fiberfill. Use a ratio of 1/2lb per cubic foot.
8. Apply the included foam gasket to the speaker to ensure a sealed fit. Be sure that the mounting holes line up on the foam gasket.
9. Connect the wires to the woofer observing the proper polarity, positive and negative terminals. Strip away the insulation of the wire about 1/4" and install the wires into the terminal posts.
10. Install the woofer into the box using the provided 10-24 bolts.
11. Once the box is completed it is time to connect the speaker wire coming from the subwoofer enclosure to your amplifier. Check that you use the proper wire for consistent polarity, positive and negative. (Refer to amplifier owner's manual.)
12. Finally, sit back and enjoy to the incredible enhancement your new *PrecisionPower* subwoofer brings to your audio system.

SEALED ENCLOSURE


Sealed speaker diagram



Internal dimensions should be calculated to determine the correct box volume.
Be sure to allow for speaker displacement and extra bracing (if used).

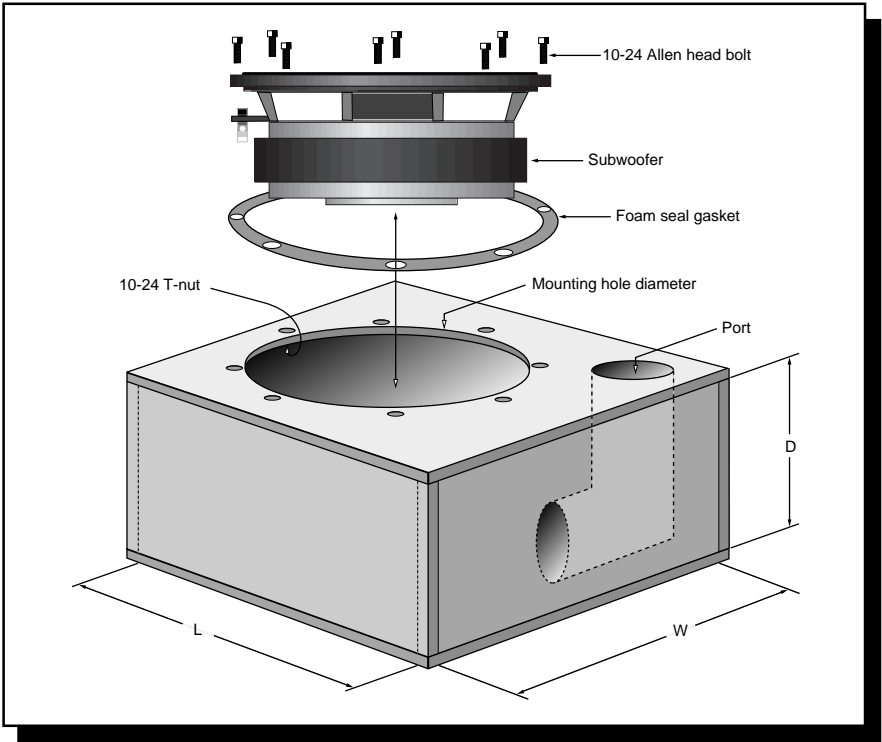
PORTED ENCLOSURE

Building A Ported Enclosure:

- 
1. Build a sealed box with internal dimensions of LxWxD as specified for your woofer. Use 3/4" thick material (preferably medium density fiber board or equivalent) for box construction. Be sure to use wood glue and silicone to ensure your enclosure is sealed properly, as air leaks will affect the performance of a subwoofer. (The use of an air stapler will help to achieve the nicest results for constructing the enclosure.)
 2. Using the supplied template, trace the appropriate circle and mounting hole pattern for your *PrecisionPower* subwoofer on the proper side for mounting the woofer. Be sure to offset the woofer to one side to allow for the port to fit comfortably. (See Diagram)
 3. Cut the speaker hole out of the box with a router. Use a guide or template whenever possible for a clean, accurate job; use a jig saw only if a router is not available. Drill out the mounting holes with a 7/32" drillbit.
 4. Locate the port material which you are going to use. Trace the pattern of the appropriate hole needed for the port, then cut the hole out. When installing the port, make sure you have a distance of at least the diameter of the port from the end of the port to the wall inside the box. To best seal off any air leaks use silicone around the inside edge. Also, bevel the inside edge of both ends of the port to cut down on port noise.
 5. Place the woofer into the hole which you have cut into the box to check the fit. Make sure that the T-nut holes line up.
 6. Install the 10-24 T-nuts (supplied) into the 7/32" holes from the backside of the mounting board.
 7. Run an appropriate length of wire into the box, leaving enough length to comfortably install the wires to the terminals on the woofer before placing the speaker into its mounting hole. Use a terminal cup whenever possible.
 8. Vacuum out any shavings and dust that could find it's way into your woofer from the inside of the box. Line the box with a polyester fiberfill blanket or fiberglass insulation about 1" thick.
 9. Apply the included foam gasket to the speaker to ensure a sealed fit. Be sure that the mounting holes line up on the gasket.
 10. Connect the wires to the woofer observing the proper polarity, positive and negative terminals. Strip away the insulation of the wire about a 1/4" and install the wires into the terminal posts.
 11. Install the woofer into the box using the provided 10-24 bolts.
 12. Once the box is completed it is time to connect the speaker wire coming from the subwoofer enclosure to your amplifier. Check that you use the proper wire for consistent polarity, positive and negative. (Refer to amplifier owner's manual.)
 13. Finally, sit back and enjoy to the incredible enhancement your new *PrecisionPower* subwoofer brings to your audio system.

PORTED ENCLOSURE

Ported speaker diagram



Internal dimensions should be calculated to determine the correct box volume. Be sure to allow for speaker displacement, extra bracing (if used), and port displacement. It may be necessary to angle the port to fit your design. To calculate volume of the port: $\text{Radius}^2 \times 3.14 \times \text{Length of port}$.

POWERCLASS PRO8 Subwoofer

PRO8 Specifications

Normal Power Handling	200W rms
Voice Coil Diameter	2"
Voice Coil Type / Former	edge wound/Kapton
Resonant Frequency	40Hz
Qts-Total Damping	.37
Qms- Mechanical Damping	1.5
Qes- Electromagnetic Damping	.50
Vas- Equivalent Compliance Volume	14 Liter
DC Resistance of V.C.	4Ω / 8Ω
Sensitivity(SPL at 1W)	85 dB
Linear Excursion	±5.5mm
Peak to Peak Excursion	±13mm
Mms- Total Mass	59.9 grams
Sd- Piston Area	0.0191 sqM
Bl- Magnet Product	11.13 TM
Diaphragm Material	carbon fiber/Nomex honeycomb
Basket Material	cast aluminum
Net Weight	14.44lb
Dimensions	8.375" dia. X 4.125" H
Mounting Diameter	7.25" dia.

PRO8 Sealed Enclosure

Basic working dimensions for the **PRO8**

Outer Diameter	8 3/8"
Mounting Hole Diameter	7 1/4"
Mounting Depth (from bottom of top ring)	4 1/4"
Speaker Displacement	.07 cubic foot

Inside Volume / Internal Box Dimensions

.33 cubic foot	LxWxD 12" x 9" x 6 13/32"
.50 cubic foot	LxWxD 14" x 10" x 7 9/32"
.75 cubic foot	LxWxD 12" x 10" x 12 1/32"

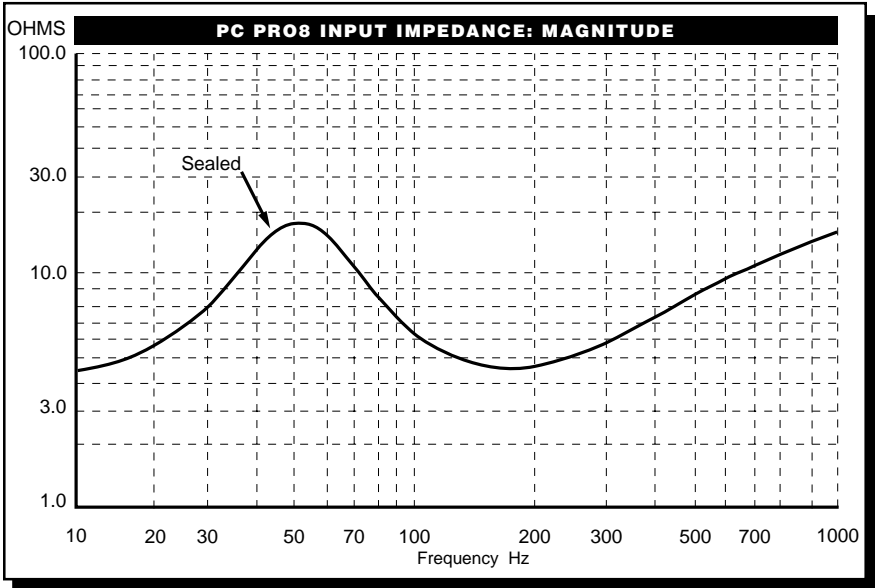
PRO8 Ported Enclosure

Due to the very small box size and the very large port necessary to appropriately tune the enclosure, we do not recommend a ported enclosure for the **PRO8**

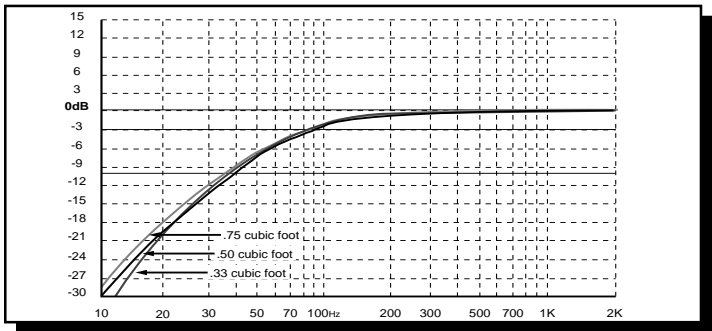


POWERCLASS PRO8 Subwoofer

PRO8 IMPEDANCE CURVE*



PRO8 Sealed RESPONSE CURVE*



PRO8 Ported RESPONSE CURVE*

Due to the very small box size and the very large port necessary to appropriately tune the enclosure, we do not recommend a ported enclosure for the **PRO8**



*ACTUAL IN-CAR RESPONSE CURVE WILL VARY BASED ON CAR TYPE, WOOFER LOADING, AND ENCLOSURE DESIGN.

POWERCLASS PRO10 Subwoofer

PRO10 Specifications

Normal Power Handling	300W rms
Voice Coil Diameter	3"
Voice Coil Type / Former	edge wound/Kapton
Resonant Frequency	37Hz
Qts-Total Damping	0.36
Qms- Mechanical Damping	2.22
Qes- Electromagnetic Damping	0.42
Vas- Equivalent Compliance Volume	34.1 Liter
DC Resistance of V.C.	4Ω / 8Ω
Sensitivity(SPL at 1W)	88.1 dB
Linear Excursion	±5.5mm
Peak to Peak Excursion	±13mm
Mms- Total Mass	75.13 grams
Sd- Piston Area	0.0315 sqM
Bl- Magnet Product	12.92 TM
Diaphragm Material	carbon fiber/Nomex honeycomb
Basket Material	cast aluminum
Net Weight	23.66lb
Dimensions	10.4" dia. X 4.75" H
Mounting Diameter	9.25" dia.

PRO10 Sealed Enclosure

Basic working dimensions for the **PRO10**

Outer Diameter	10 7/16"
Mounting Hole Diameter	9 1/4"
Mounting Depth (from bottom of top ring)	4 1/4"
Speaker Displacement	.092 cubic foot

Inside Volume / Internal Box Dimensions

0.5 cubic foot	LxWxD	16 5/16" x 10 1/16" x 6 1/4"
.75 cubic foot	LxWxD	18 5/16" x 11 5/16" x 7"
1.0 cubic foot	LxWxD	20" x 12 3/8" x 7 5/8"

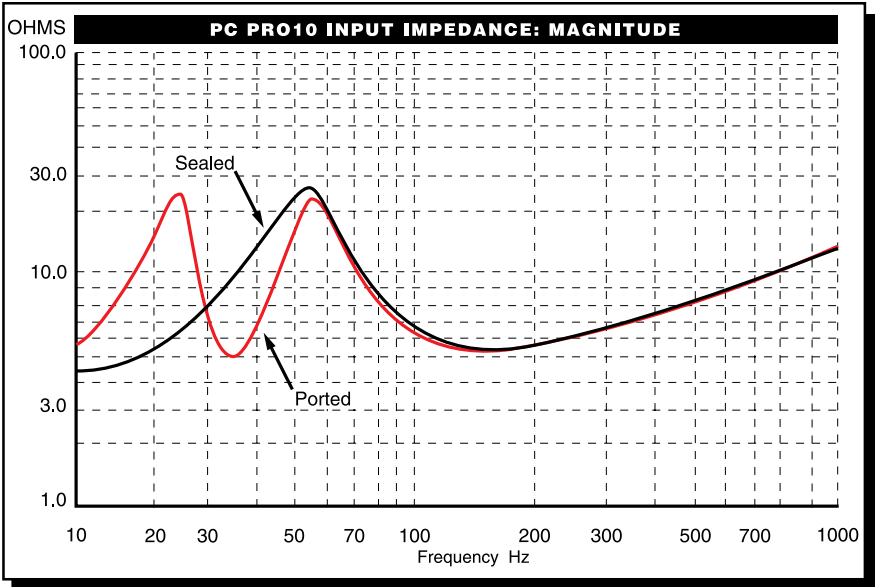
PRO10 Ported Enclosure

Basic working dimensions for the **PRO10**

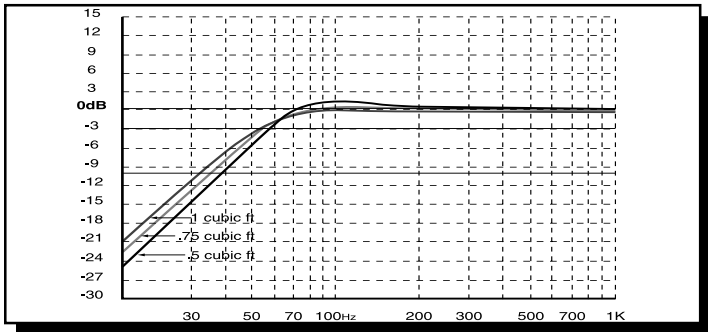
Outer Diameter	10 7/16"
Mounting Hole Diameter	9 1/4"
Mounting Depth (from bottom of top ring)	4 1/4"
Speaker Displacement	.092 cubic foot
Inside Volume	1.0 cubic foot
Internal Box Dimensions (LxWxD)	20 1/4" x 12 1/2" x 7 3/4"
Port Length	10 1/16"
Port Diameter	3" ID
Port Displacement	.04 cubic foot

POWERCLASS PRO10 Subwoofer

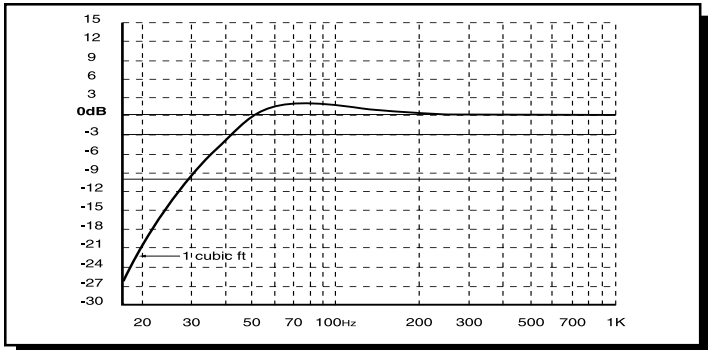
PRO10 IMPEDANCE CURVE*



PRO10 Sealed RESPONSE CURVE*



PRO10 Ported RESPONSE CURVE*



*ACTUAL IN-CAR RESPONSE CURVE WILL VARY BASED ON CAR TYPE, WOOFER LOADING, AND ENCLOSURE DESIGN

POWERCLASS PRO12 Subwoofer

PRO12 Specifications

Normal Power Handling	300W rms
Voice Coil Diameter	3"
Voice Coil Type / Former	edge wound/Kapton
Resonant Frequency	43Hz
Qts-Total Damping	0.52
Qms- Mechanical Damping	2.51
Qes- Electromagnetic Damping	0.66
Vas- Equivalent Compliance Volume	43.97 Liter
DC Resistance of V.C.	4Ω / 8Ω
Sensitivity(SPL at 1W)	89.31 dB
Linear Excursion	±5.5mm
Peak to Peak Excursion	±13mm
Mms- Total Mass	114.7 grams
Sd- Piston Area	0.0512 sqM
Bl- Magnet Product	13.74 TM
Diaphragm Material	carbon fiber/Nomex honeycomb
Basket Material	cast aluminum
Net Weight	24.18lb
Dimensions	12.27" dia. X 4.75" H
Mounting Diameter	11.125" dia.

PRO12 Sealed Enclosure

Basic working dimensions for the **PRO12**

Outer Diameter	12 9/32"
Mounting Hole Diameter	11 1/8"
Mounting Depth(from bottom of top ring)	4 1/4"
Speaker Displacement	.098 cubic feet

Inside Volume / Internal Box Dimensions

1.0 cubic foot	LxWxD 20" x 12 3/8" x 7 5/8"
1.25 cubic feet	LxWxD 21 7/16" x 13 1/4" x 8 3/16"
1.50 cubic feet	LxWxD 22 11/16" x 14" x 8 11/16"

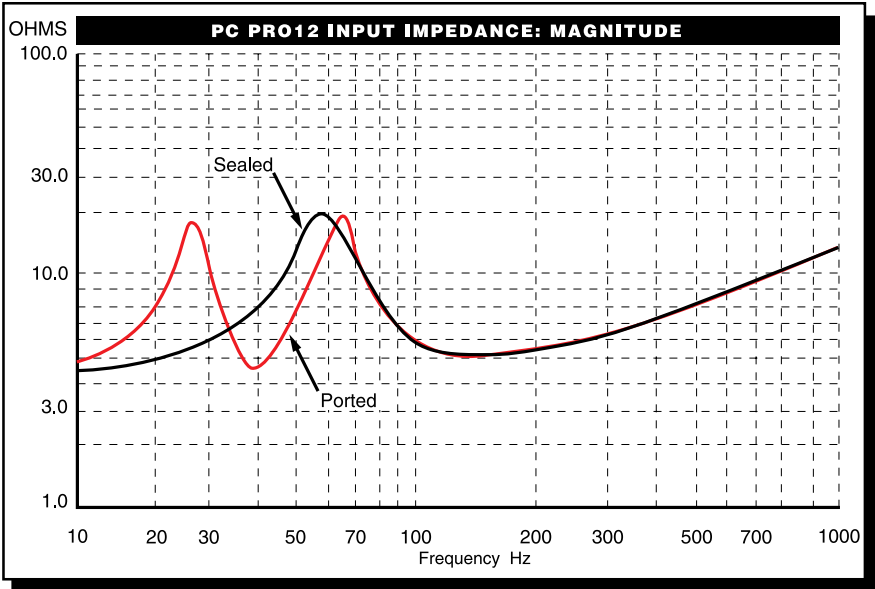
PRO12 Ported Enclosure

Basic working dimensions for the **PRO12**

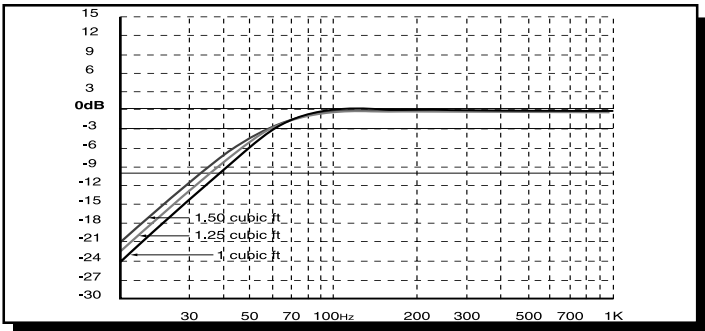
Outer Diameter	12 9/32"
Mounting Hole Diameter	11 1/8"
Mounting Depth(from bottom of top ring)	4 1/4"
Speaker Displacement	.098 cubic feet
Inside Volume	1.50 cubic feet
Internal Box Dimensions (LxWxD)	23 1/16" x 14 1/4" x 8 13/16"
Port Length	11 1/16"
Port Diameter	4" ID
Port Displacement	.08 cubic foot

POWERCLASS PRO12 Subwoofer

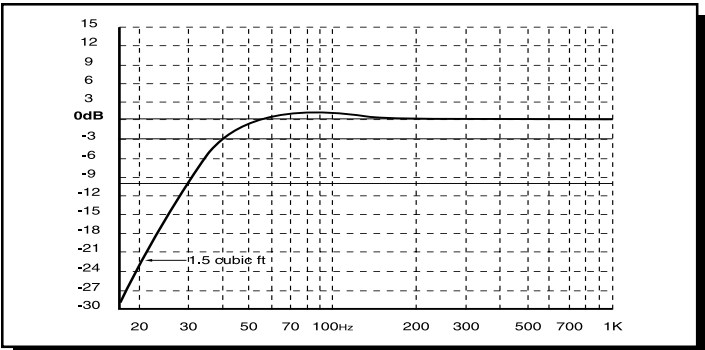
PRO12 IMPEDANCE CURVE*



PRO12 Sealed RESPONSE CURVE*



PRO12 Ported RESPONSE CURVE*



*ACTUAL IN-CAR RESPONSE CURVE WILL VARY BASED ON CAR TYPE, WOOFER LOADING, AND ENCLOSURE DESIGN.

Additional information

The **PowerClass PRO8** subwoofer will give you excellent results in sealed enclosures from .33 cubic foot to over .75 cubic foot.

The **PowerClass PRO10** subwoofer will give you excellent results in enclosures from .5 cubic foot to over 1 cubic foot, ported or sealed.

The **PowerClass PRO12** subwoofer will give you excellent results in enclosures from 1 cubic foot to over 1.5 cubic feet, ported or sealed.

If a ported enclosure is utilized, the port should be tuned from 32-40 Hz. Use as large a port diameter as possible to eliminate port “whistle”. Be sure to refer to diagrams and charts for specifications for your new subwoofer.

Our dealers are trained to achieve the highest level of performance from our products. If you are installing your new subwoofers on your own and need assistance, please call your local **PrecisionPower** dealer or **PrecisionPower** Technical Service Department at

1-800-62-POWER.

Thanks again for choosing **PrecisionPower**.



 **FerroSound** The Solution Is Loud And Clear™

Ferrosound means more stable sound quality and performance, smoother frequency response, reduced distortion, increased power handling, greater efficiency and voice coil centering.

NOTE: Abuse and/or Installation Error: **PrecisionPower** defines abuse as, but not limited to, burnt voice coils (blackened, no continuity, melted adhesives, coil separated from the former, etc.), punctured or damaged surrounds, broken speaker terminals, non-**PrecisionPower** modifications, bent, chipped, or broken frames, ripped spiders, or damaged back plates. Speakers submitted with any of the above will be considered out of warranty.

WARRANTY

Three-Year Limited U.S.A. Warranty

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. *PrecisionPower* warrants its products to be free from defects in materials and workmanship under normal use and service for a period of three (3) years from the date of original purchase when the unit is installed by an Authorized Dealer. Non-Authorized Dealer installed products carry a one (1) year parts and ninety (90) days labor limited warranty. The extent and conditions of Limited Warranty are as follows:

1. Authorized Dealer Installed Products: *PrecisionPower* will either repair or replace at no charge, to the original purchaser, any unit which *PrecisionPower's* examination discloses to be defective and under warranty, provided the defect occurs within three (3) years from the date of original purchase when the unit is installed by an Authorized Dealer and the product is returned immediately to *PrecisionPower*. This warranty is not transferable.

2. Non-Authorized Dealer Installed Products: *PrecisionPower* will either repair or replace at no charge, to the original purchaser, any unit which *PrecisionPower's* examination discloses to be defective and under warranty, provided the defect occurs within ninety (90) days from the date of purchase and the product is returned immediately to *PrecisionPower*. Warranty claims beyond ninety (90) days for Non-Authorized Dealer Installed Products will be for parts only and will extend for one (1) year from the date of purchase. This warranty is not transferable.

3. The date of purchase and proof of Authorized Dealer Installation of a PrecisionPower product must be established by an original sales receipt which must accompany the article being returned for warranty work.

4. This warranty shall NOT apply to any *PrecisionPower* product found to have the original factory serial number removed or defaced. All products received (by *PrecisionPower*) for in warranty or out of warranty repair, with their original serial numbers removed or defaced, will NOT be repaired and will be returned to sender, freight collect. Refer to original packaging for the serial number of your component speakers.

5. The provisions of this warranty shall not apply to any *PrecisionPower* product used for a purpose for which it is not designed, which has been repaired or altered in any way, or which has been connected, installed, or adjusted other than in accordance with the instructions furnished in *PrecisionPower's* owner's manual. Nor shall this warranty apply to any part which has been subject to misuse, neglect, or accident.

6. PrecisionPower does not authorize any other persons to assume any other liability in connection with its products. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY PRECISIONPOWER APPLICABLE TO ITS PRODUCTS. ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO PRECISIONPOWER PRODUCTS IS LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY. PRECISIONPOWER SHALL NOT BE LIABLE FOR THE INCIDENTAL, CONSEQUENTIAL, OR COMMERCIAL DAMAGES RESULTING FROM THE BREACH OF THIS WRITTEN WARRANTY. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts; so the above limitations or exclusions may not apply to you.

7. Your product will be serviced on an in-warranty basis within the warranty period for the correction of warranted defects. If improper operation of your *PrecisionPower* product should occur, contact your Authorized Dealer for assistance with the return and factory repair of your *PrecisionPower*

product. If an Authorized Dealer is not available, return the unit including your name, telephone number, return address, a copy of your sales receipt, and a description of the problem to:

**PrecisionPower, Inc.
Service Department
4829 S. 38th Street
Phoenix, AZ 85040-2964**

TO RETURN PRECISIONPOWER PRODUCTS OUT OF WARRANTY: Return the unit, postage prepaid, in the original protective carton. Please include a description of the problem and, if desired, a request for an estimate of repair costs. Unless a request for an estimate is included, the unit will be repaired as necessary. Please contact *PrecisionPower* Customer Service at 1-800-62-POWER for questions concerning out of warranty repair charges. Repaired unit will be returned with an itemized statement, C.O.D.

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