X-TREME T3 WOOFER SPECIFICATION SHEET

EM·PHASER

The X-Treme T3 subwoofer series has been engineered and built to provide tight and accurate bass reproduction with fast and precise transient response. The T3 drivers will give you high SPL scores and excellent power handling.

X-TREME T3 WOOFER KEY FEATURES

■ EMPHASER PROPRIETARY CAST ALUMINUM BASKET
EMPHASER's new proprietary cast aluminum basket line features a high structural rigidity, eliminating the possibility of flexing under the massive motor structure. The deep draw structure of the new baskets enables a huge cone travel due to the increased distance between spider platforms to bottom of the baskets.

■ BACKVENTED BASKET
The vented cavity below the spider helps to counteract dynamic compression effects by the air trapped under the spider. This results in noticeably quieter operation of the T3 woofers at high listening levels and it also helps to improve cooling of the voice-coil assembly.

■ CELLULOSE-NOMEX™ COMPOSITE CONE
The X-Treme T3 woofers incorporate cones made of a new material blend that consists of cellulose and Nomex fibers. The inverse curvelinear shape of the T3 cones adds stiffness in the transmission range below 100Hz. T3 woofer cones are light, yet incredibly stiff and well damped.

■ EXCLUSIVE MOTOR STRUCTURE
Two stacked Strontium-Ferrite magnet rings power up the magnet motor of each T3 woofer. The back plate design has undergone FEA optimisation to achieve best magnetic flux density in the air gap. The back plate is CNC machined from one piece of solid steel, featuring a bumped, extended and undercut design. The new back plates stand for optimum flux field symmetry above and below the air gap, and for highest possible cone excursions.

■ 4-LAYER COPPER WIRE VOICE-COIL
Huge diameter copper voice-coils with appropriate winding heights substantially increase the thermal power handling headroom of the T3 woofers. Large coil winding heights are decreasing power compression at high input loads and they give the necessary X-Max values, making each woofer of the T3 line a loud and hard hitting experience.

■ NOMEX™ SPIDER
The T3 woofers use unconventionally huge spiders made of Nomex fibers with linear deflection characteristics, to improve excursion capabilities and lower 2nd harmonic distortion level. The spiders used in the T3 woofers have undergone force vs. deflection analysis, to yield a perfectly symmetrical limiting and linear guidance of the cone assembly.

■ HI-PROFILE SANTOPRENE™ RUBBER SURROUND
Santoprene surround material is utilized for proper centering of the cone throughout the large excursion capabilities of the T3 woofers. The new geometry, shape and thickness of the T3 woofer surrounds have been designed, to yield an improved cross section structure favorizing height vs. width.

■ RED KAPTON VOICE COIL FORMER
The voice-coil formers are made of red Kapton, wearing a upper collar reinforcement made of TIL glasfiber epoxy material. The reinforcement prevents the voice coil assembly from oscillations under full power loads. Red Kapton offers good stiffness and highest thermal breakdown temperatures.

EMPHASER laboratories recommend to use the X-Treme T3 woofers in combination with sealed, vented or bandpass enclosures. For optimum X-treme T3 woofer performance, make sure to follow the basic enclosure suggestions listed overleaf.

If - for some reason - the provided system/enclosure suggestions cannot be applied within your specific vehicle or car audio system, please contact your EMPHASER dealer for further assistance.

ELECTRICAL & MECHANICAL SPECIFICATIONS		EX10T3	EX12T3	EX15T3
Usable Frequency Response*		30 - 150 Hz	20 - 150 Hz	15 - 100 Hz
Continuous Power Handling*		500 Watts	700 Watts	700 Watts
Peak Power Handling*		700 Watts	1000 Watts	1000 Watts
Nominal Impedance		4 Ohms	4 Ohms	4 Ohms
Voice Coil Diameter		63 mm	78 mm	78mm
Voice Coil Winding Height		35mm	35mm	35mm
Front Pole Plate Height		10mm	10mm	10mm
Magnet Weight		48oz x 2	61oz. x 2	61oz. x 2
Sensitivity		85.2 dB/1W/1m	87.3 dB/1W/1m	87.9 dB/1W/1m
*Exact performance data depending upon actual enclosure!				
Thiele - Small Parameters				
Free-Air Resonance	(Fs)	32.0 Hz	31.0 Hz	26.0 Hz
DC Resistance	(Re)	3.9 Ohms	3.4 Ohms	3.9 Ohms
Electrical Damping	(Qes)	0.41	0.36	0.51
Mechanical Damping	(Qms)	9.1	7.1	9.9
Total Damping	(Qts)	0.39	0.34	0.49
Equivalent Volume of Compliance	(Vas)	25.5 l	43.1 l	119.7 l
Moving Mass incl. Air Load	(Mms)	190.3 g	252.8 g	332.7 g
Electrically Limited Cone Excursion	(Xmax)	12.5 mm	12.5 mm	12.5mm
Effective Cone Surface	(Sd)	346.4 cm^2	506.7 cm^2	819.4 cm^2
Volume Displacement of Cone	(Vd)	866 cm^3	1267 cm^3	2048 cm^3

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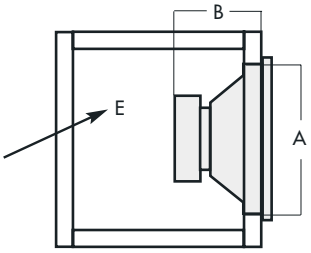
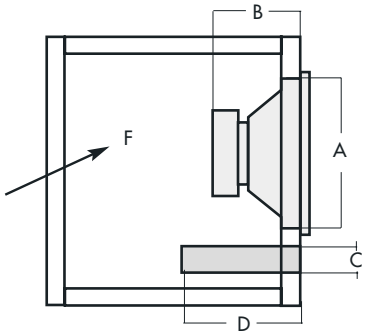
Mounting Dimensions

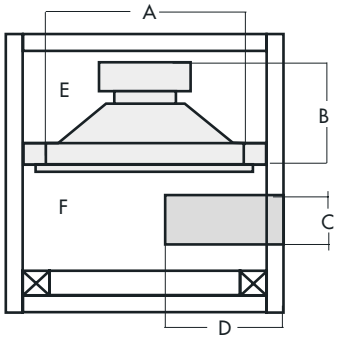
	EX10T3	EX12T3	EX15T3
Mounting Diameter	235 mm	285 mm	361 mm
Mounting Depth	164 mm	186 mm	215 mm



SEALED ENCLOSURE



PORTED ENCLOSURE



BANDPASS ENCLOSURE

A = Mounting Diameter
B = Mounting Depth
C = Inside Port Diameter
D = Port Length
E = Sealed Chamber
F = Ported Chamber

RECOMMENDED ENCLOSURES	EX10T3	EX12T3	EX15T3
SEALED ENCLOSURE			
Net Volume:	19 l	32 l	68 l
PORTED ENCLOSURE			
Net Volume:	35 l	65 l	135 l
Port Diameter:	1 x 10 cm	1 x 10 cm	2 x 10 cm
Port Length:	26 cm	18 cm	26 cm
BANDPASS ENCLOSURE			
Net Volume Ported Chamber:	20 l	28 l	56 l
Net Volume Sealed Chamber:	15 l	24 l	45 l
Port Diameter:	1 x 10 cm	2 x 10 cm	3 x 10 cm
Port Length:	15 cm	25 cm each	19 cm each

Important notes on enclosure construction and cabinet damping!

For best results, we highly recommend the enclosures to be constructed of either 22mm MDF (Medium Density Fiber-Board) or 21mm birch plywood.

Each enclosure type must be damped according to its function principle:

● The sealed enclosure must be filled completely with acrylic fibre, or - even better - lined with structured PU-foam.

The inner walls of a **ported enclosure** should be lined with structured PU-foam.

● The sealed chamber of the bandpass enclosure has to be filled with acrylic fibre while the ported chamber remains free of any damping material.

WARRANTY

EMPHASER Inc. Wyoming, Michigan USA warrants this X-treme T3 woofer to be free of defects in materials and workmanship for one year from the date of purchase, contingent upon being installed in a proper enclosure as built or approved by an authorized EMPHASER dealer.
EMPHASER Inc. will at its own discretion repair or replace any mechanically defective speaker unit during the warranty period.
Should your EMPHASER woofer require warranty service, please return it to the retailer from whom it was purchased. Please do not send any product to EMPHASER Inc., Wyoming,U.S.A. Should you have difficulty in finding an authorized EMPHASER service centre, details are available from the national distributor in the country of purchase.

Abuse of the woofer due to excessive amplifier power, improper enclosure design, amplifier clipping or physical damage is **not covered under warranty.**

EMPHASER Inc. Wyoming, Michigan U.S.A.