

# WOOFER LF21X451

Professional Low Frequency Transducer

PART NUMBER **11100092**

## Features

- 4.5 - inch, fibreglass inside-outside copper voice coil
- 4000 Watt continuous program power handling
- 97 dB Sensitivity
- 28 Hz - 1 kHz Frequency range
- 30.5 T/m BL
- 54 mm peak-to-peak excursion
- Dual-forced hyper-venting and 15mm top plate for minimum power compression
- Dual spider design with silicon based dampening control
- Triple-roll surround and corrugated straight cone geometry

The LF21X451 low frequency transducer is the result of many years of R&D developments with the goal of creating new levels of professional audio performance standards. This products features advancements and improvements in all the key areas of transducer technology.

Incredibly linear frequency response characteristics, the highest power handling of any comparable transducer, the lowest power compression.

The LF21X451 features a fibre loaded cone assembly along with a high excursion triple roll, constant geometry surround: this combination provides remarkable strength and a peak to peak maximum excursion of 54 mm..

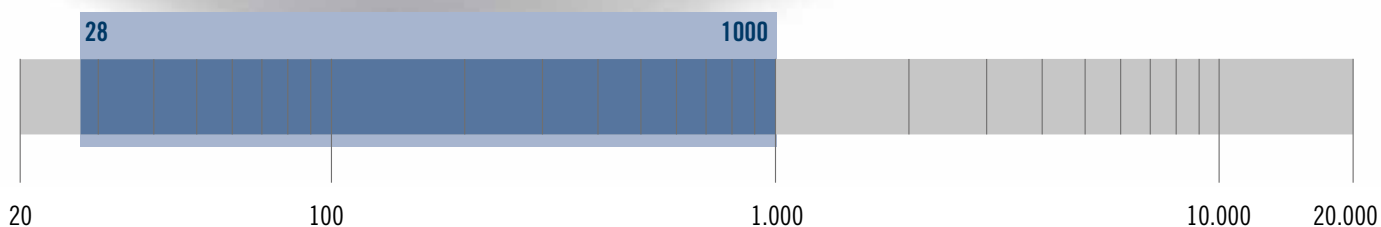
The new dual forced hyper-venting system guarantee a very efficient voice coil ventilation for minimum power compression and incredible power handling.

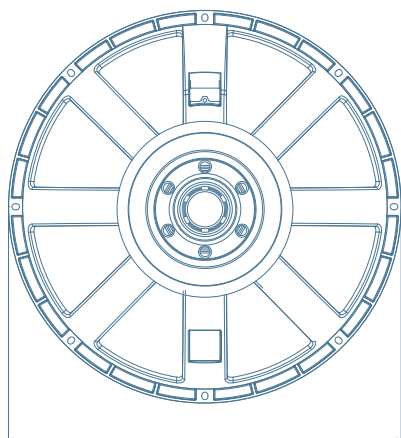
## Applications

The LF21X451 is ideal in applications where combinations of incredible power handling, reasonable weight and ultra fast time response are required.

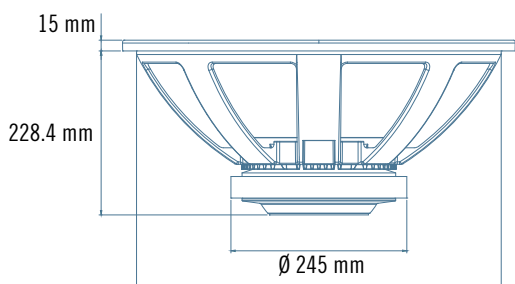
Perfect for powerful lows in horn loaded sub bass systems or reflex designs.

Ideal for touring, find a perfect application in high power, heavy duty, club subwoofer systems.



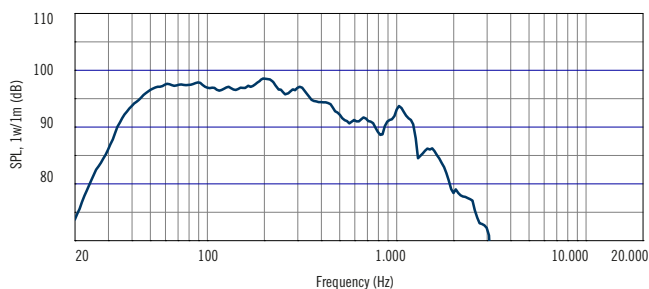


Ø 547 mm

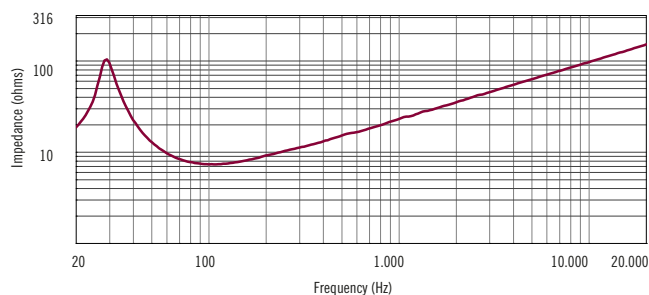


Ø 245 mm

Ø 508 mm



Frequency response curve of the loudspeaker made in a hemispherical, free field and mounted in a reflex box with an internal volume of 250 litres and tuned at 40Hz, applying a sinusoidal signal of 2.83 V @8 at 1m.



Impedance magnitude curve measured in free air.

## General Specifications

Nominal Diameter	530 / 21	mm/inch
Rated Impedance	8	ohm
Program Power <sup>1</sup>	4000	Watts
Power handling capacity <sup>2</sup>	2000	Watts
Sensitivity <sup>3</sup>	97	dB
Frequency Range	28-1000	Hz
Effective Piston Diameter	470 / 18,5	mm/inch
Max Excursion Before Damage (peak to peak)	54 / 2,12	mm/inch
Minimum Impedance	6,7	ohm
Voice Coil Diameter	115 / 4,5	mm/inch
Voice Coil Material	Copper	
Voice coil former material	fiberglass	
Voice Coil Winding Depth	34 / 1,33	mm/inch
Number of layers	2	
Kind of layer	inside/outside	
Top Plate Thickness	15 / 0,6	mm/inch
Cone Material	No pressed pulp	
Cone Design	Curved	
Surround Material	Polycotton	
Surround Design	Triple roll	

## Thiele - Small Parameters <sup>4</sup>

Resonance frequency	Fs	28	Hz
DC resistance	Re	5,4	ohm
Mechanical factor	Qms	6,9	
Electrical factor	Qes	0,39	
Total factor	Qts	0,37	
BL Factor	BL	30,5	T · m
Effective Moving Mass	Mms	355	gr
Equivalent Cas air load	Vas	385	liters
Effettive piston area	Sd	0,173	m <sup>2</sup>
Max. linear excursion (mathematical) <sup>5</sup>	Xmax	13,5	mm
Voice - coil inductance @ 1KHz	Le1K	1,4	mH
Half-space efficiency	Eff	2,20	%

## Mounting Information

Overall Diameter	547 / 21,5	mm/inch
Bolt Circle Diameter	527 / 20,7	mm/inch
Bolt Hole Diameter	6,5 / 0,25	mm/inch
Front Mount Baffle Cut-out	512 / 20,1	mm/inch
Rear Mount Baffle Cut-out	512 / 20,1	mm/inch
Depth	230 / 9,05	mm/inch
Volume occupied by the driver <sup>6</sup>	6,5 / 0,229	liters/ft3

## Shipping Information

Net Weight	15,5 / 34,0	Kg/Lbs
Shipping Weight	11,8 / 38,8	Kg/Lbs

## Notes to Specifications

1 Program Power is defined as 3 dB greater than AES power. - 2 AES standard. - 3 Sensitivity measurement is based on a 500-2,5 kHz pink noise signal with input power of 2.83V @ 8 Ohms. - 4 Thiele-Small parameters are measured after a 2 hour warm up period running the loudspeaker at full power handling capacity. - 5 The maximum linear excursion is calculated as:  $(Hvc - Hg)/2 + Hg/4$  where Hvc is the voice coil depth and Hg the gap depth. - 6 Calculated for front mounting on 18 mm thick board.