

## WOOFER

# LF18N451

Professional Low Frequency Transducer

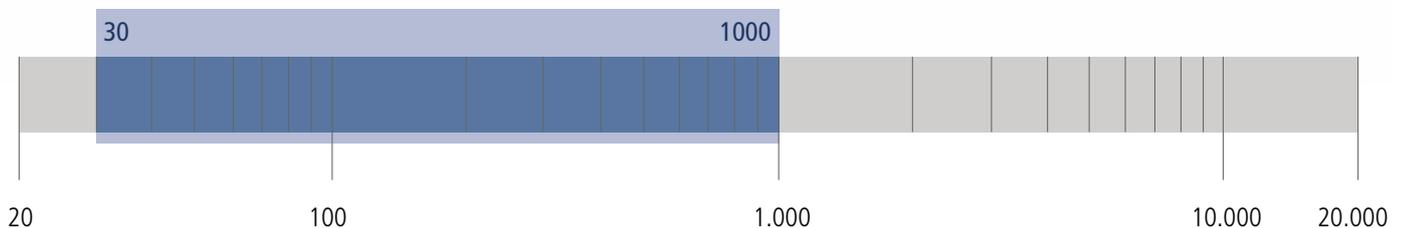
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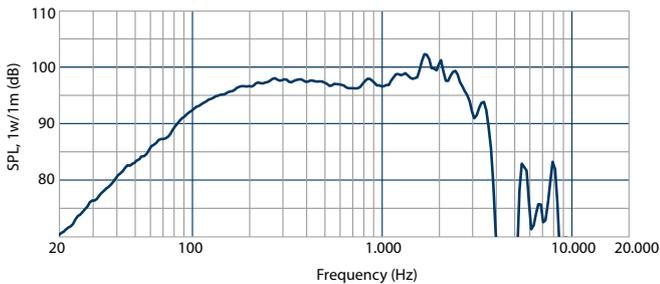
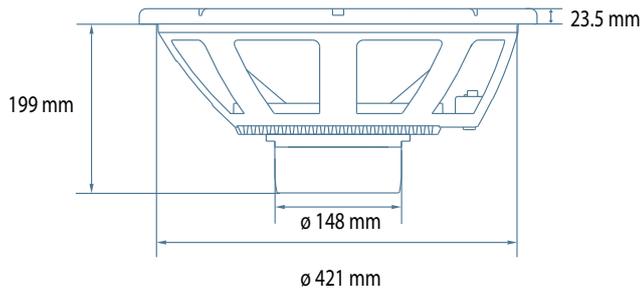
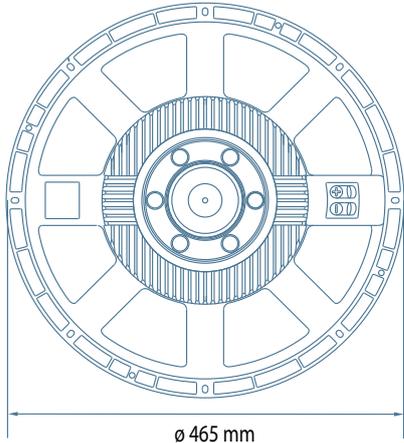
The LF18N451 is a very high power handling and efficiency transducer specially designed to provide powerful and accurate bass frequencies with low distortion and low power compression. Ultra fast time response. The LF18N451 uses a fibre loaded cone assembly along a large triple roll surround, this combination provides remarkable strength and control. Double silicon spider system ensures excellent control during large excursions. A fully optimised T-pole design generate the minimum amount of flux modulation. The Dual-forced air venting system provides a very efficient voice coil ventilation to minimize the power compression.

- 4,5 - inch Inside/Outside copper voice coil
- 3000 Watt continuous program power handling
- 97.5dB Sensitivity
- 30Hz - 1kHz Frequency range
- Dual-forced air ventilation for minimum power compression
- Dual spider designed with silicon based damping control
- BL of 30.2 T/m to provide a faster and accurate low frequency

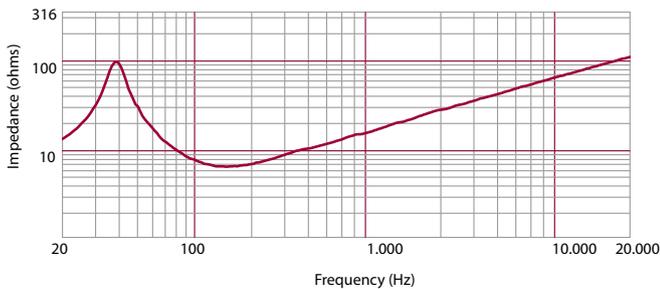
## APPLICATIONS

The LF18N451 is ideal in applications where light weight ,very high BL and power handling are required. It's especially designed for touring, perfect for powerful lows in horn loaded sub system or reflex designs.





Frequency response curve of the loudspeaker taken in a hemispherical, free field environment and mounted in a closed box with an internal volume of 600 litres (21,2 cu.ft) enclosing the rear of the driver



Impedance magnitude curve measured in free air

## GENERAL SPECIFICATIONS

Nominal Diameter	460/18	mm/inch
Rated Impedance	8	ohm
Program Power <sup>1</sup>	3000	Watts
Power handling capacity <sup>2</sup>	1500	Watts
Sensitivity <sup>3</sup>	97.5	dB
Frequency Range	30 - 1000	Hz
Effective Piston Diameter	395/15.6	mm/inch
Max Excursion Before Damage (peak to peak)	60/2.36	mm/inch
Minimum Impedance	6.3	ohm
Voice Coil Diameter	115/4.5	mm/inch
Voice Coil Material	Copper	
Voice Coil Winding Depth	26/1.02	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	31	Hz
DC resistance	Re	5.0	ohm
Mechanical factor	Qms	6.0	
Electrical factor	Qes	0.25	
Total factor	Qts	0.24	
BL Factor	BL	30.2	T · m
Effective Moving Mass	Mms	235	gr
Equivalent Cas air load	Vas	245	liters
Effettive piston area	Sd	0.122	m <sup>2</sup>
Max. linear excursion (mathematical) <sup>5</sup>	Xmax	8.8	mm
Voice - coil inductance @ 1KHz	Le1K	2.6	mH
Half-space efficiency	Eff	2.54	%

## MOUNTING INFORMATION

Overall Diameter	465/18.3	mm/inch
Bolt Circle Diameter	442-447/17.4-17.6	mm/inch
Bolt Hole Diameter	6.5/0.25	mm/inch
Front Mount Baffle Cut-out	424/16.7	mm/inch
Rear Mount Baffle Cut-out	425/16.7	mm/inch
Depth	199/7.83	mm/inch
Volume occupied by the driver <sup>6</sup>	5.5/0.19	liters/ft3

## SHIPPING INFORMATION

Net Weight	10.6/23.3	Kg/Lbs
Shipping Weight	11.8/26	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.

The data are not binding; RCF reserves the right to modify the data at any time and without previous notice.