

# **18QLEX1600Fe**

LOW FREQUENCY TRANSDUCER

**QLEX Series** 

### KEY FEATURES — maltcross

- High power handling and low distortion 18" subwoofer
- · High force factor design for top performance applications
- Exclusive Malt Cross<sup>®</sup> Technology Cooling System
- Low power compression losses
- High sensitivity: 97 dB (1W / 1m)
- FEA optimized ceramic magnetic circuit
- Aluminium demodulating ring
- Ultra low air noise

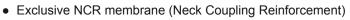
Notes

Optimized linear behaviour



### **TECHNICAL SPECIFICATIONS**

Nominal diameter	460 mr	n 18 in
Rated impedance		8 Ω
Minimum impedance		6,3 Ω
Power capacity <sup>1</sup>		1.600 W <sub>AES</sub>
Program power <sup>2</sup>		3.200 W
Sensitivity	97 dB 1V	V / 1m @ Z <sub>N</sub>
Frequency range	3	0 - 1.000 Hz
Recom. enclosure		V <sub>b</sub> = 125 I
(Bass-reflex design)		F <sub>b</sub> = 39 Hz
Voice coil diameter	101,6 mr	n 4 in
BI factor		36,4 N/A
Moving mass		0,323 kg
Voice coil length		32 mm
Air gap height		15 mm
X <sub>damage</sub> (peak to peak)		60 mm



- Weatherproof cone with treatment for both sides •
- Double silicone spider
- 4" QUATTRO in/out copper voice coil
- Extended controlled displacement: Xmax ± 13 mm
- 60 mm peak-to-peak excursion before damage
- Optimized for direct radiation and band-pass subwoofer • applications



### THIELE-SMALL PARAMETERS<sup>3</sup>

Resonant frequency, f <sub>s</sub>	30 Hz
D.C. Voice coil resistance, R <sub>e</sub>	5,3 Ω
Mechanical Quality Factor, Q <sub>ms</sub>	6,5
Electrical Quality Factor, Q <sub>es</sub>	0,24
Total Quality Factor, Q <sub>ts</sub>	0,23
Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub>	195 I
Mechanical Compliance, C <sub>ms</sub>	88 µm / N
Mechanical Resistance, R <sub>ms</sub>	9,3 kg / s
Efficiency, η <sub>0</sub>	2,1 %
Effective Surface Area, S <sub>d</sub>	0,1255 m <sup>2</sup>
Maximum Displacement, X <sub>max</sub> <sup>4</sup>	13 mm
Displacement Volume, V <sub>d</sub>	1631 cm <sup>3</sup>
Voice Coil Inductance, L <sub>e</sub>	3,9 mH

<sup>2</sup> Program power is defined as power capacity + 3 dB. 3 T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

<sup>4</sup> The X<sub>max</sub> is calculated as (L<sub>vc</sub> - H<sub>ag</sub>)/2 + (H<sub>ag</sub>/3,5), where L<sub>vc</sub> is the voice coil length and H<sub>ag</sub> is the air gap height.

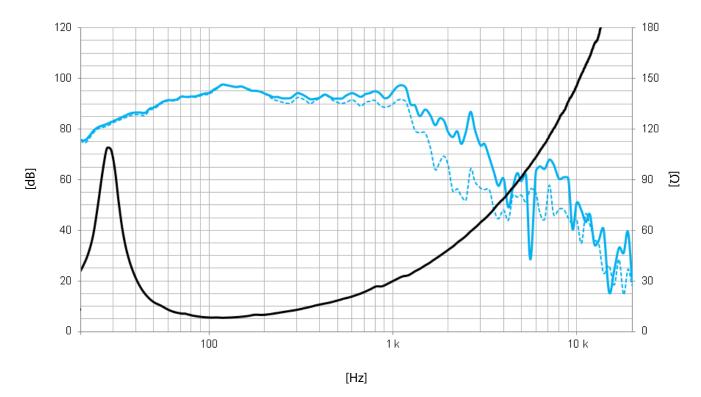
<sup>1</sup> The power capaticty is determined according to AES2-1984 (r2003) standard.



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Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m  $\,$ 

Frequency response on axis Frequency response 45° off axis

### **MOUNTING INFORMATION**

Overall diameter	462 mm	18,2 in	
Bolt circle diameter	440 mm	17,3 in	
Baffle cutout diameter:			
- Front mount	415 mm	16,3 in	
Depth	233 mm	9,2 in	462
Volume displaced by driver	8,0 I	0,28 ft <sup>3</sup>	0
Net weight	14,9 kg	32,8 lb	
Shipping weight	16,2 kg	35,7 lb	

### **DIMENSION DRAWING**

