

# 18QLEX1600Fe 4Ω

**LOW FREQUENCY TRANSDUCER QLEX Series** 



- 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: 96 dB (1W / 1m)
- FEA optimized ceramic magnetic circuit
- · Aluminium demodulating ring
- Ultra low air noise
- · Optimized linear behaviour

- Exclusive NCR membrane (Neck Coupling Reinforcement)
- Weatherproof cone with treatment for both sides
- Double silicone spider
- 4" QUATTRO in/out copper voice coil
- Extended controlled displacement: X<sub>max</sub> ± 13 mm
- 58 mm peak-to-peak excursion before damage
- Optimized for direct radiation and band-pass subwoofer applications





## TECHNICAL SPECIFICATIONS

Manager at all and a face			
Nominal diameter	460 mm	18 in	
Rated impedance		4 Ω	
Minimum impedance		6,1 Ω	
Power capacity <sup>1</sup>	1.6	1.600 W <sub>AES</sub>	
Program power <sup>2</sup>		3.200 W	
Sensitivity	96 dB 1W /	1m @ Z <sub>N</sub>	
Frequency range	30 -	1.200 Hz	
Recom. enclosure	,	V <sub>b</sub> = 125 I	
(Bass-reflex design)	F	= 39 Hz	
Voice coil diameter	101,6 mm	4 in	
BI factor		30,7 N/A	
Moving mass		0,336 kg	
Voice coil length		32 mm	
Air gap height		15 mm	
X <sub>damage</sub> (peak to peak)		58 mm	

# THIELE-SMALL PARAMETERS3

Resonant frequency, f <sub>s</sub>	31 Hz
D.C. Voice coil resistance, R <sub>e</sub>	3,6 Ω
Mechanical Quality Factor, Q <sub>ms</sub>	11,6
Electrical Quality Factor, Qes	0,25
Total Quality Factor, Qts	0,25
Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub>	177,2 I
Mechanical Compliance, C <sub>ms</sub>	80 μm / N
Mechanical Resistance, R <sub>ms</sub>	5,6 kg/s
Efficiency, η <sub>0</sub>	2 %
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>	1.631 cm <sup>3</sup>
Voice Coil Inductance, Le	2,8 mH

### Notes

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

<sup>&</sup>lt;sup>2</sup> Program power is defined as power capacity + 3 dB.

<sup>3</sup> 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>&</sup>lt;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.

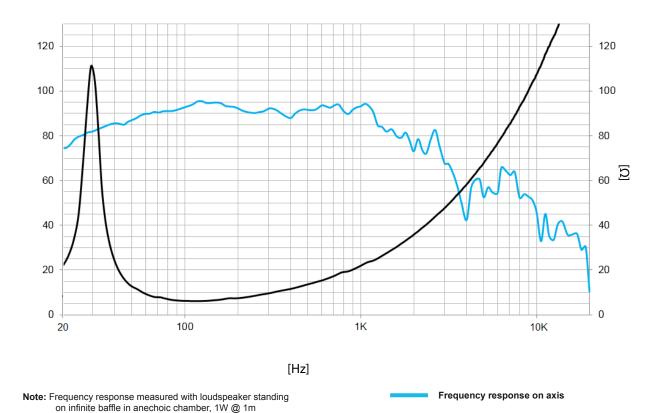


[dB]

# 18QLEX1600Fe $4\Omega$

LOW FREQUENCY TRANSDUCER

QLEX Series



# **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
Volume displaced by driver	81	2,8 ft <sup>3</sup>
Net weight	14,9 kg	32,8 lb
Shipping weight	12,2 kg	35,7 lb

## **DIMENSION DRAWING**

