

18QLEX1600Fe

LOW FREQUENCY TRANSDUCER QLEX Series



- High power handling and low distortion 18" subwoofer
- High force factor design for top performance applications
- Exclusive Malt Cross[®] 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
- 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_{max} ± 13 mm
- 60 mm peak-to-peak excursion before damage
- Optimized for direct radiation and band-pass subwoofer applications





TECHNICAL SPECIFICATIONS

Nominal diameter	460 mm	18 in
Rated impedance		8 Ω
Minimum impedance		6,3 Ω
Power capacity ¹	1.6	600 W _{AES}
Program power ²		3.200 W
Sensitivity	97 dB 1W /	1m @ Z _N
Frequency range	30 -	1.000 Hz
Recom. enclosure		V _b = 125 I
(Bass-reflex design)	F	_b = 39 Hz
Voice coil diameter	101,6 mm	4 in
BI factor		36,4 N/A
Moving mass		0,323 kg
Voice coil length		32 mm
Air gap height		15 mm
X _{damage} (peak to peak)		60 mm

THIELE-SMALL PARAMETERS 3

Resonant frequency, f _s	30 Hz
D.C. Voice coil resistance, R _e	5,3 Ω
Mechanical Quality Factor, Q _{ms}	6,5
Electrical Quality Factor, Qes	0,24
Total Quality Factor, Qts	0,23
Equivalent Air Volume to C _{ms} , V _{as}	195 I
Mechanical Compliance, C _{ms}	88 μm / N
Mechanical Resistance, R _{ms}	9,3 kg / s
Efficiency, η ₀	2,1 %
Effective Surface Area, S _d	0,1255 m ²
Maximum Displacement, X _{max} ⁴	13 mm
Displacement Volume, V _d	1631 cm ³
Voice Coil Inductance, Le	3,9 mH

Notes

¹ The power capaticty is determined according to AES2-1984 (r2003) standard

² 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).

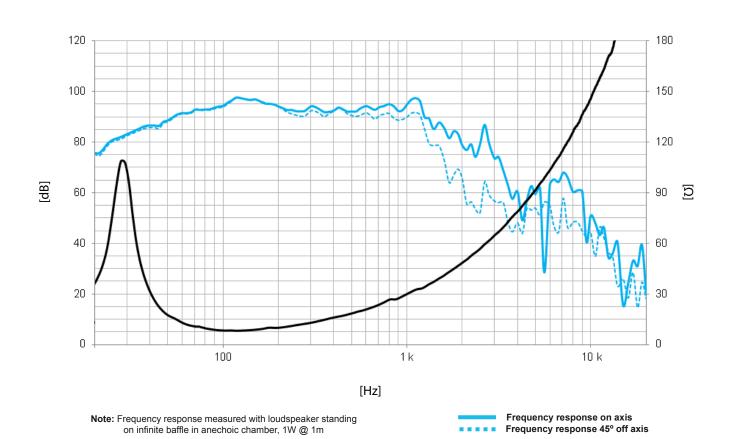
⁴ The X_{max} is calculated as (L_{vc} - H_{ag})/2 + (H_{ag}/3,5), where L_{vc} is the voice coil length and H_{ag} is the air gap height.



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MOUNTING INFORMATION

Overall diameter	462 mm	18,2 in
Bolt circle diameter	441 mm	17,4 in
Baffle cutout diameter:		
- Front mount	426 mm	16,8 in
Depth	233 mm	9,2 in
Volume displaced by driver	8,0 I	0,28 ft ³
Net weight	14,6 kg	32,1 lb
Shipping weight	15,9 kg	35,0 lb

DIMENSION DRAWING

