beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

18QLEX1600Fe 4Ω

LOW FREQUENCY TRANSDUCER

QLEX Series

KEY FEATURES

maltcross TECHNOLOGY

- 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: 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_{max} ± 13 mm
- 58 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		4 Ω
Minimum impedance		6,1 Ω
Power capacity [1]		1.600 W_{AES}
Program power [2]		3.200 W
Sensitivity	96 dB	1W / 1m @ Z_N
Frequency range		30 - 1.200 Hz
Recom. enclosure		V_b = 125 l
(Bass-reflex design)		F_b = 39 Hz
Voice coil diameter	101,6 mm	4 in
Bl factor		30,7 N/A
Moving mass		0,336 kg
Voice coil length		32 mm
Air gap height		15 mm
X_{damage} (peak to peak)		58 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	31 Hz
D.C. Voice coil resistance, R_e	3,6 Ω
Mechanical Quality Factor, Q_{ms}	11,6
Electrical Quality Factor, Q_{es}	0,25
Total Quality Factor, Q_{ts}	0,25
Equivalent Air Volume to C_{ms}, V_{as}	177,2 l
Mechanical Compliance, C_{ms}	80 µm / N
Mechanical Resistance, R_{ms}	5,6 kg / s
Efficiency, η_0	2 %
Effective Surface Area, S_d	0,1255 m^2
Maximum Displacement, X_{max} [4]	13 mm
Displacement Volume, V_d	1.631 cm^3
Voice Coil Inductance, L_e	2,8 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.

Acústica Beyma SL - P.I. Moncada II, C/ Pont Sec, 1C - 46113 Moncada, Valencia (Spain) - Tel. +34 96 130 13 75 - beyma@beyma.com

beyma

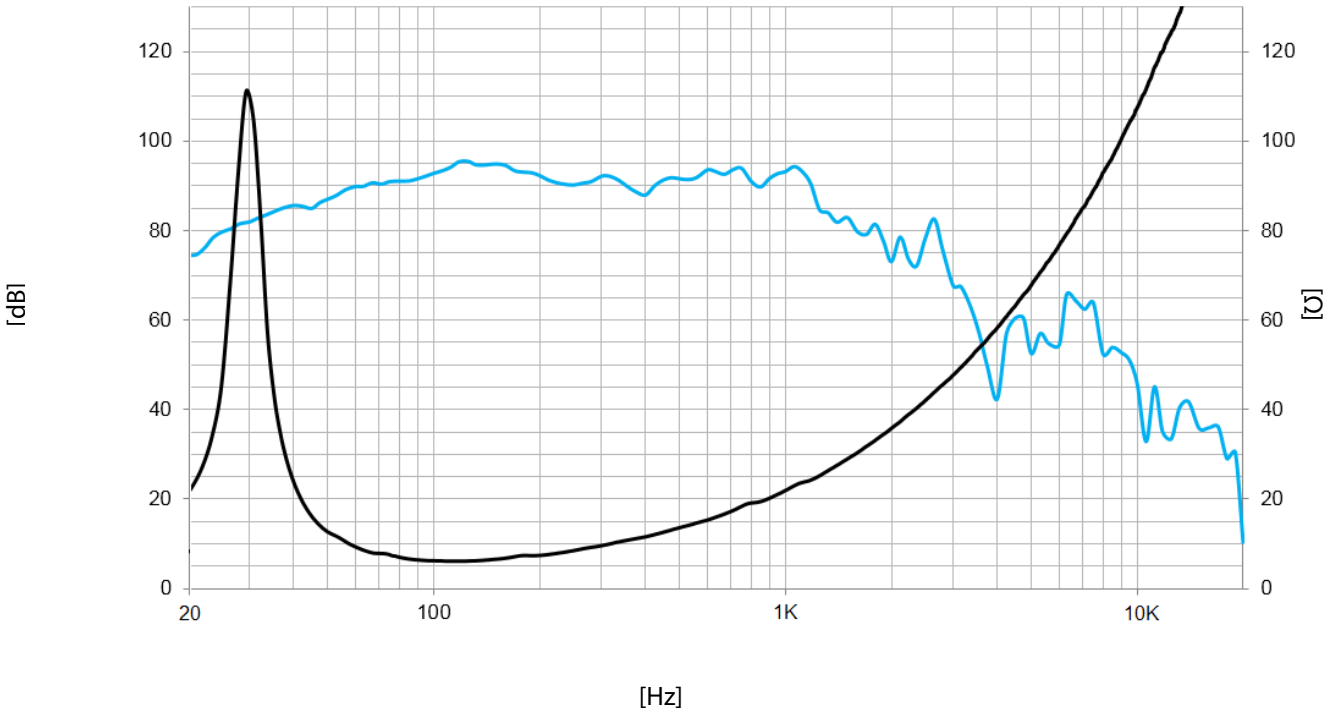
PROFESSIONAL LOUDSPEAKERS

www.beyma.com

18QLEX1600Fe 4Ω

LOW FREQUENCY TRANSDUCER

QLEX Series



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

Frequency response on 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
Volume displaced by driver	8 l	2,8 ft^3
Net weight	14,9 kg	32,8 lb
Shipping weight	12,2 kg	35,7 lb

DIMENSION DRAWING

