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PROFESSIONAL LOUDSPEAKERS
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21QLEX1600Fe
LOW FREQUENCY TRANSDUCER
QLEX Series

KEY FEATURES

maltcross
TECHNOLOGY

- High power handling and low distortion 21" subwoofer
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 98 dB (1W / 1m)
- FEA optimized ceramic magnetic circuit
- Aluminium demodulating ring
- Ultra low air noise
- Optimized linear behaviour

- 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	540 mm	21 in
Rated impedance		8 Ω
Minimum impedance		6,3 Ω
Power capacity [1]		1.600 W$_{AES}$
Program power [2]		3.200 W
Sensitivity	98 dB	1W / 1m @ Z$_N$
Frequency range		30 - 1.000 Hz
Recom. enclosure		V$_b$ = 170 l
(Bass-reflex design)		F$_b$ = 38 Hz
Voice coil diameter	101,6 mm	4 in
Bl factor		36,4 N/A
Moving mass		0,388 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$_e$	5,4 Ω
Mechanical Quality Factor, Q$_{ms}$	4,5
Electrical Quality Factor, Q$_{es}$	0,30
Total Quality Factor, Q$_{ts}$	0,28
Equivalent Air Volume to C$_{ms}$, V$_{as}$	309 l
Mechanical Compliance, C$_{ms}$	72 μm / N
Mechanical Resistance, R$_{ms}$	16,2 kg / s
Efficiency, η$_0$	2,7 %
Effective Surface Area, S$_d$	0,1734 m^2
Maximum Displacement, X$_{max}$ [4]	13 mm
Displacement Volume, V$_d$	2254 cm^3
Voice Coil Inductance, L$_e$	4 mH

Notes:

[1] The power capaticty is determined according to AES2-1984 (r2003) standard.
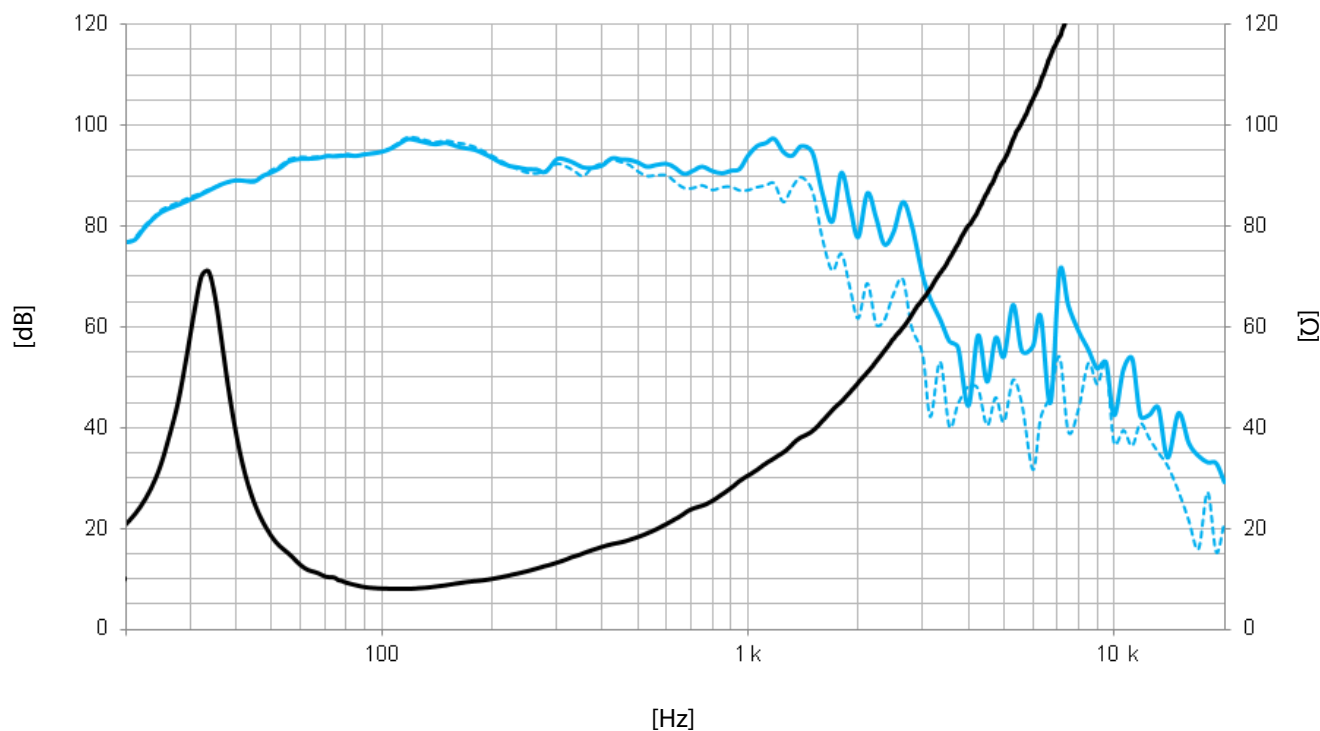
[2] Program power is defined as power capacity + 3 dB.

[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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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	545 mm	21,5 in
Bolt circle diameter	522,5 mm	20,6 in
Baffle cutout diameter:		
- Front mount	492 mm	19,4 in
Depth	266 mm	10,5 in
Volume displaced by driver	11,5 l	0,40 ft³
Net weight	17,1 kg	37,6 lb
Shipping weight	19,6 kg	43,1 lb

DIMENSION DRAWING

∅ 9 x 13,5
∅ 545
∅ 492
∅ 522,50
Polarity +
247
266

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