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PROFESSIONAL LOUDSPEAKERS
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12MCB700
LOW & MID FREQUENCY TRANSDUCER
### Preliminary Data Sheet

KEY FEATURES

maltcross TECHNOLOGY

- High power handling: 1.400 W program power
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 98 dB (1W / 1m)
- FEA optimized magnetic circuit
- Optimized non-linear behaviour

- Waterproof cone treatment on both sides of the cone
- 3" DUO double layer in/out copper voice coil
- Aluminium demodulating ring
- Extended controlled displacement: X_{max} ± 7 mm
- 45 mm peak-to-peak excursion before damage
- Optimized for low frequency and mid-bass applications
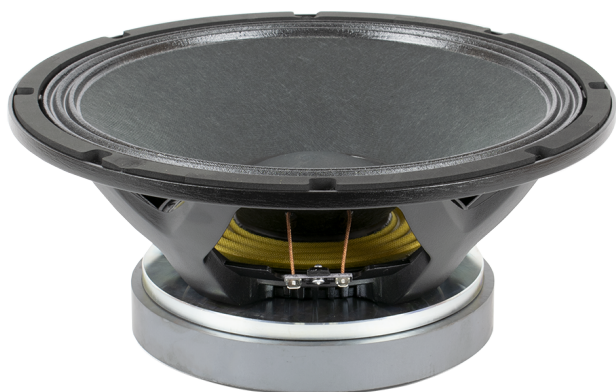
TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm	12 in
Rated impedance		8 Ω
Minimum impedance		7,1 Ω
Power capacity [1]		700 W$_{AES}$
Program power [2]		1.400 W
Sensitivity	98 dB	1W / 1m @ Z$_N$
Frequency range		55 - 4.000 Hz
Recom. enclosure		V$_b$ = 40 l
(Bass-reflex design)		F$_b$ = 67 Hz
Voice coil diameter	76,2 mm	3 in
Bl factor		20,4 N/A
Moving mass		0,069 kg
Voice coil length		18 mm
Air gap height		9,5 mm
X$_{damage}$ (peak to peak)		45 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f$_s$	51 Hz
D.C. Voice coil resistance, R$_e$	5,4 Ω
Mechanical Quality Factor, Q$_{ms}$	3,9
Electrical Quality Factor, Q$_{es}$	0,29
Total Quality Factor, Q$_{ts}$	0,27
Equivalent Air Volume to C$_{ms}$, V$_{as}$	59,5 l
Mechanical Compliance, C$_{ms}$	139 μm / N
Mechanical Resistance, R$_{ms}$	5,6 kg / s
Efficiency, η$_0$	2,7 %
Effective Surface Area, S$_d$	0,055 m^2
Maximum Displacement, X$_{max}$ [4]	7 mm
Displacement Volume, V$_d$	385 cm^3
Voice Coil Inductance, L$_e$	0,9 mH

Notes:

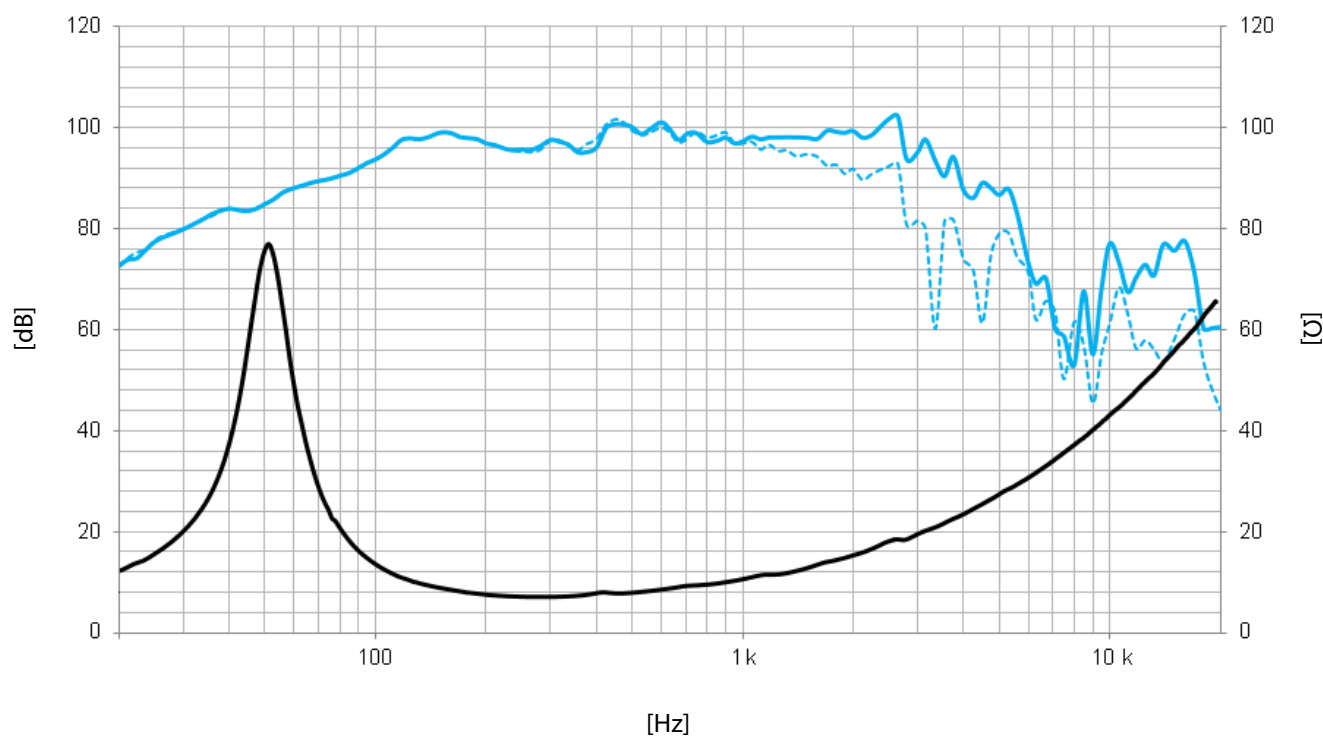[1] The power capaticty is determined according to AES2-1984 (r2003) standard.

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

—— Frequency response on axis
····· Frequency response 45º off axis

MOUNTING INFORMATION

Overall diameter	312 mm	12,3 in
Bolt circle diameter	295 mm	11,6 in
Baffle cutout diameter:		
- Front mount	278 mm	10,9 in
Depth	145 mm	5,7 in
Net weight	7,8 kg	17,2 lb
Shipping weight	9,5 kg	20,9 lb

DIMENSION DRAWING

Ø 6.5
Ø 295
Ø 312
Ø 278
Polarity +
145

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