

**10MCB700** 

**LOW & MID FREQUENCY TRANSDUCER** 

**MCB** Series

## KEY FEATURES — Maltcross

- High power handling: 1.400 W program power
- Exclusive Malt Cross<sup>®</sup> Technology Cooling System
- Low power compression losses
- High sensitivity: 96 dB (1W / 1m)
- FEA optimized magnetic circuit
- · Optimized non-linear behaviour

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



#### **TECHNICAL SPECIFICATIONS**

Nominal diameter	250 mm	10 in
Rated impedance		8 Ω
Minimum impedance		7,1 Ω
Power capacity <sup>1</sup>	70	00 W <sub>AES</sub>
Program power <sup>2</sup>		1.400 W
Sensitivity	96 dB 1W / 1	m @ Z <sub>N</sub>
Frequency range	80 - 4	4.000 Hz
Recom. enclosure		V <sub>b</sub> = 14 I
(Bass-reflex design)	F	= 76 Hz
Voice coil diameter	76,2 mm	3 in
BI factor		20,1 N/A
Moving mass		0,055 kg
Voice coil length		18 mm
Air gap height		9,5 mm
X <sub>damage</sub> (peak to peak)		45 mm

### **THIELE-SMALL PARAMETERS**<sup>3</sup>

Resonant frequency, f <sub>s</sub>	75 Hz
D.C. Voice coil resistance, R <sub>e</sub>	5,3 Ω
Mechanical Quality Factor, Q <sub>ms</sub>	4,9
Electrical Quality Factor, Q <sub>es</sub>	0,35
Total Quality Factor, Q <sub>ts</sub>	0,33
Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub>	13,2 I
Mechanical Compliance, C <sub>ms</sub>	76 μm / N
Mechanical Resistance, R <sub>ms</sub>	5,5 kg / s
Efficiency, η <sub>0</sub>	1,7 %
Effective Surface Area, S <sub>d</sub>	0,035 m²
Maximum Displacement, X <sub>max</sub> <sup>4</sup>	7 mm
Displacement Volume, V <sub>d</sub>	245 cm <sup>3</sup>
Voice Coil Inductance, L <sub>e</sub>	0,9 mH

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

Notes

<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>4</sup> The X<sub>max</sub> is calculated as (L<sub>vc</sub> - H<sub>aq</sub>)/2 + (H<sub>aq</sub>/3,5), where L<sub>vc</sub> is the voice coil length and H<sub>aq</sub> is the air gap height.



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120 120 100 100 80 80 [dB] <u>כ</u> 60 60 40 40 20 20 0 0 100 1k 10 k

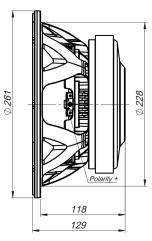
[Hz]

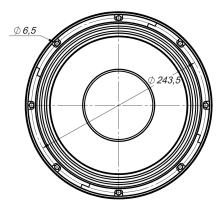
Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m Frequency response on axis Frequency response 45° off axis

### **MOUNTING INFORMATION**

Overall diameter	261 mm	10,3 in	
Bolt circle diameter	243,5 mm	9,6 in	
Baffle cutout diameter:			
- Front mount	228 mm	9,0 in	
Depth	129 mm	5,1 in	۲
Net weight	7,6 kg	16,7 lb	
Shipping weight	8,1 kg	17,8 lb	

**DIMENSION DRAWING** 





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