beyma

PROFESSIONAL LOUDSPEAKERS
www.beyma.com

18PW1400Fe/S

LOW FREQUENCY TRANSDUCER

KEY FEATURES

maltcross TECHNOLOGY

- High power handling: 1.400 W_{AES}
- Exclusive Malt Cross® Technology Cooling System
- Low power compression losses
- High sensitivity: 98 dB (1W / 1m)
- FEA optimized ferrite magnetic circuit
- Optimized non-linear parameters
- Weatherproof cone with treatment for both sides of the cone
- 4" DUO double layer in/out copper voice coil
- Aluminium demodulating ring
- Extended controlled displacement: X_{max} ± 10 mm
- 55 mm peak-to-peak excursion before damage





TECHNICAL SPECIFICATIONS

Nominal diameter	460 mm	18 in
Rated impedance		8 Ω
Minimum impedance		5,3 Ω
Power capacity [1]		1.400 W_{AES}
Program power [2]		2.800 W
Sensitivity	98 dB	1W / 1m @ Z_N
Frequency range		25 - 1.800 Hz
Recom. enclosure		V_b = 180 l
(Bass-reflex design)		F_b = 42 Hz
Voice coil diameter	101,6 mm	4 in
BI factor		29 N/A
Moving mass		0,230 kg
Voice coil length		25 mm
Air gap height		12 mm
X_{damage} (peak to peak)		55 mm

THIELE-SMALL PARAMETERS [3]

Resonant frequency, f_s	32 Hz
D.C. Voice coil resistance, R_e	5,1 Ω
Mechanical Quality Factor, Q_{ms}	10,2
Electrical Quality Factor, Q_{es}	0,28
Total Quality Factor, Q_{ts}	0,27
Equivalent Air Volume to C_{ms}, V_{as}	228,9 l
Mechanical Compliance, C_{ms}	103 μm / N
Mechanical Resistance, R_{ms}	4,6 kg / s
Efficiency, η_0	2,7 %
Effective Surface Area, S_d	0,1255 m^2
Maximum Displacement, X_{max} [4]	10 mm
Displacement Volume, V_d	1251 cm^3
Voice Coil Inductance, L_e	1,2 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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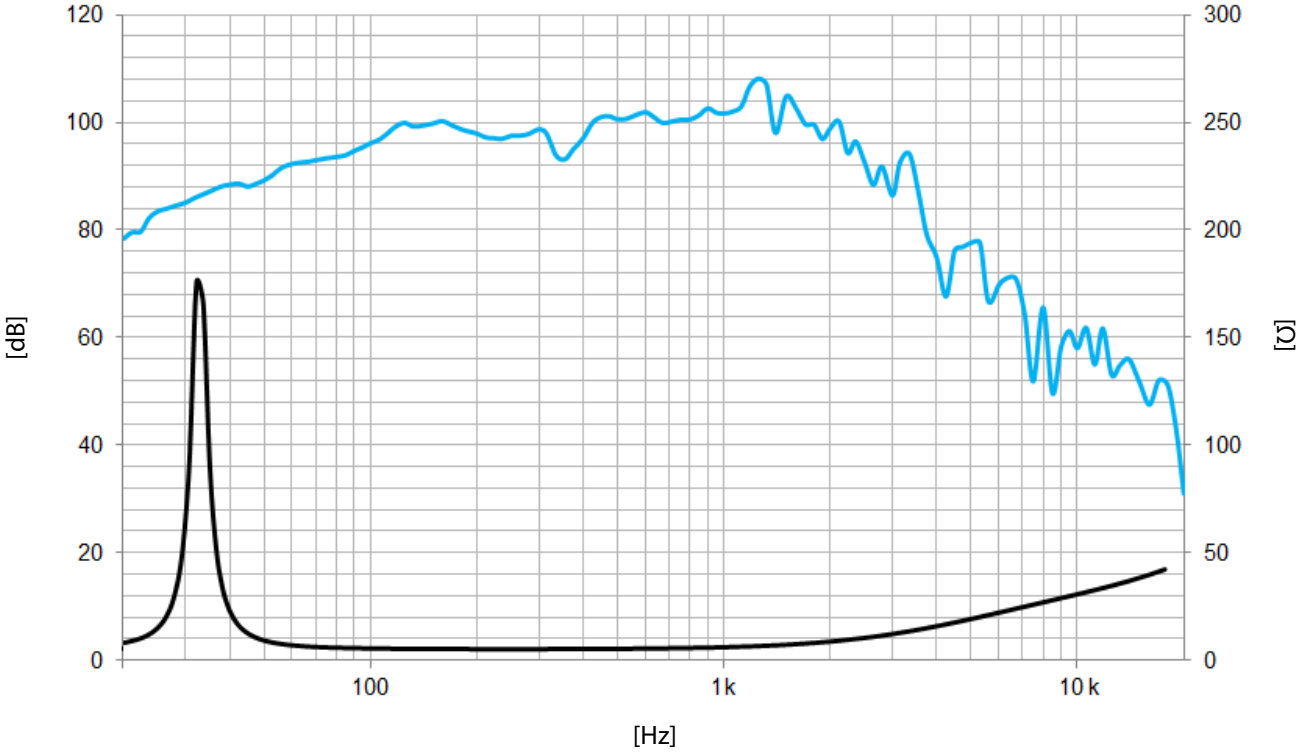
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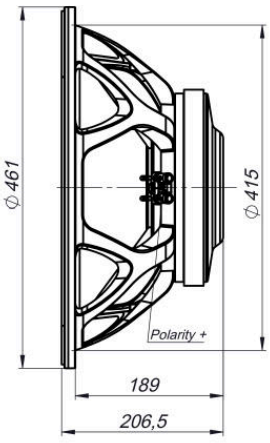


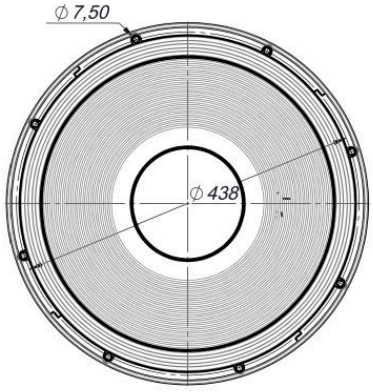
Note: Frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

MOUNTING INFORMATION

Overall diameter	461 mm	18,1 in
Bolt circle diameter	438 mm	17,2 in
Baffle cutout diameter:		
- Front mount	415 mm	16,4 in
Depth	206,5 mm	8,1 in
Net weight	16,9 kg	37,3 lb
Shipping weight	18,2 kg	40,1 lb

DIMENSION DRAWING





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