

Soft Dome Midrange ESOTAR® M-560 D

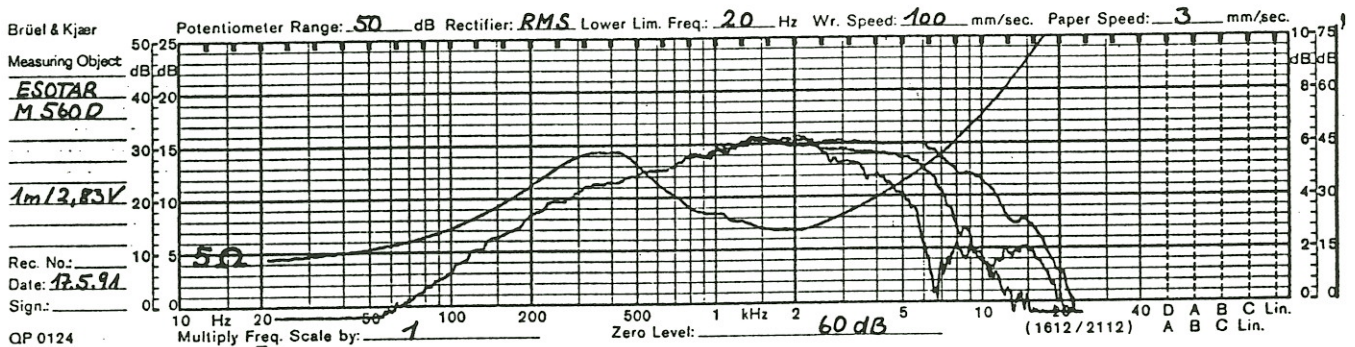
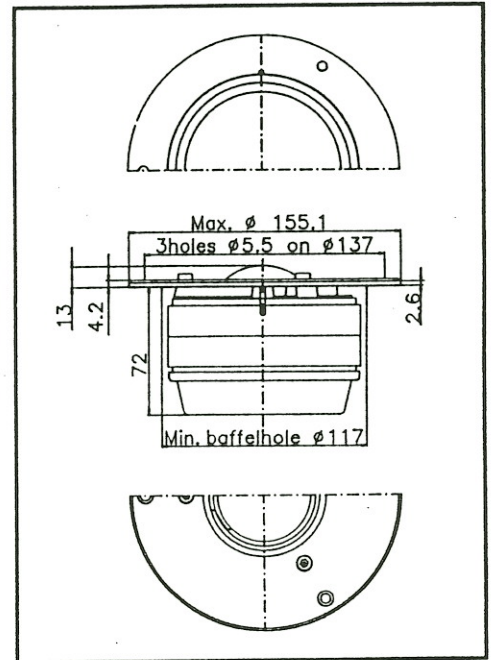
This soft dome midrange is the logical complementary to the world famous tweeter ESOTAR® T-330 D.

Many years of further research work was necessary to transfer the merits of this tweeter to this soft dome tweeter.

Extreme attention was given to the air flow behind the dome and inside the cavities. Experiments included rows of attempts under vacuum conditions as well. The result is a very special shape of the vent in the pole piece where air turbulences as well as reflexions are controlled now.

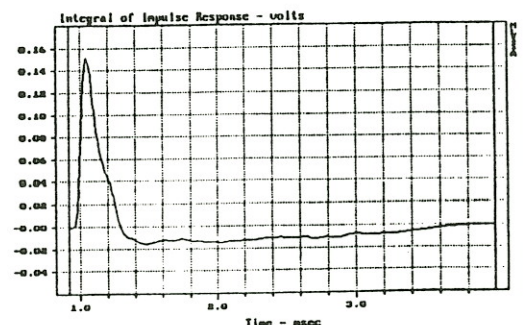
Hard dome material of course is more easy to produce and to work with, but once a soft dome has been designed and controlled correctly the results are superior due to lack of high resonance peaks.

The magnet system using heavy magnet rings is assembled with inhouse turned iron parts with lowest tolerances and the total construction is assembled under lab conditions. The ESOTAR® M-560 D is delivered by matched pairs only.

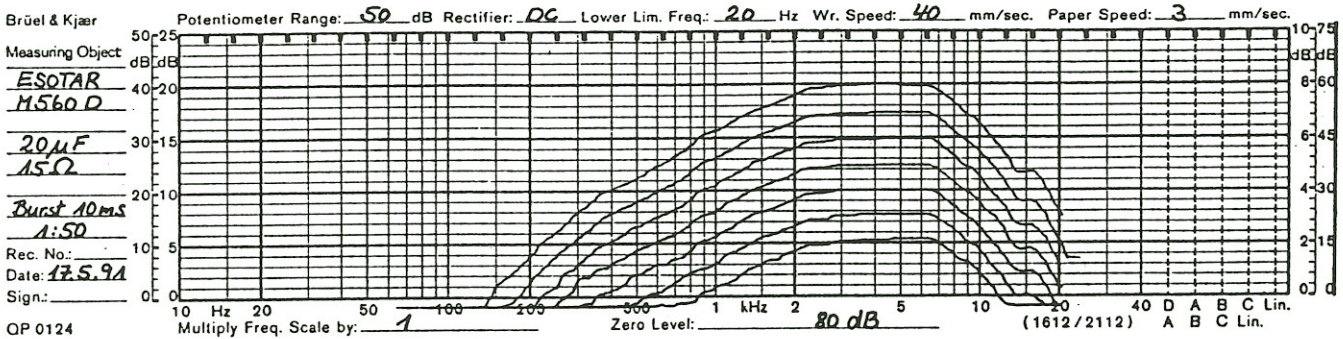


Frequency response and impedance curve of the ESOTAR® M-560 D on-axis, 30° and 60° (dist. 1 m).

The MLSSA measurements show the pulse response of the ESOTAR® M-560 D.



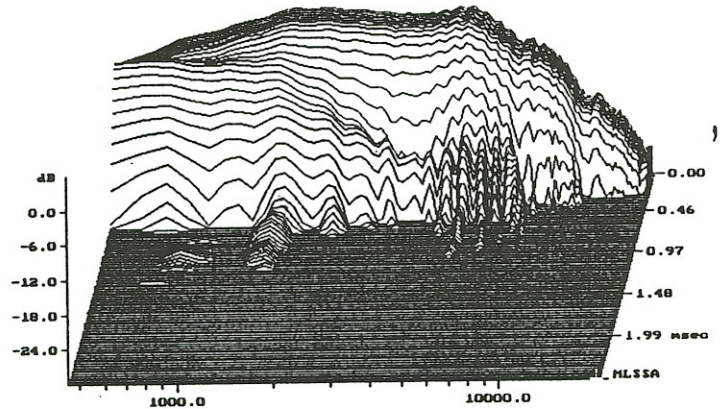
Dynamic Measurements



Levels of 1, 3, 10, 30, 100, 300 and 1,000 watts were applied while recording the curves. The parallel arrangement of the curves indicates that even fast 1,000 watt peaks do not produce any compression. Signal: Tone-Burst 10 ms, Signal-Pause 1:50.

MLSSA Waterfall Plot

The MLSSA cumulative spectral decay (waterfall) plot shows the energy/time response of the ESOTAR® M-560 D. These unique results clearly show that delayed reflections have been reduced to a minimum.



Specifications ESOTAR® M-560 D

Thiele-Small Parameter:

measured with imp. corr. (6.8 ohms and 6.8 μF parallel):

Q, mechanical		
Q, electrical	Q_{ms}	0.85
Q, total	Q_{es}	0.60
Resonance free air	Q_{ts}	0.35
force factor	f_s	325 Hz
eff. cone area	$B \times L$	6.75 Tm
moving mass	S_D	28 cm ²
lin. excursion (p-p)	M_{ms}	3.1 g
max. excursion (p-p)	X_{max}	2 mm
		5 mm

Voice coil:

diameter	d	54 mm
length	h	7 mm
layers	n	2
inductance(10 KHz)	L_c	0.2
nom. impedance	Z_{vc}	8 ohms
DC resistance	R_c	4.5 ohms

Sensitivity 2.83 V see curve

Power handling,

depending on crossover:		
nominal (long term)	IEC	>100 W
transient	10ms	>1000 W

Net weight 2400 g

Overall dimensions Ø 155 x 85 mm