

FOCAL

KEVLAR TWEETERS



FOCAL tweeters of the latest generation are all fitted with a diaphragm in the shape of an inverted dome made of KEVLAR fiber. The dome, 30 mm in diameter, is coupled with a 20 mm voice coil, fastened in its centre. This original lay-out is the only one to guarantee an excellent mechanical coupling as well as outstanding space distribution. FOCAL tweeters exhibit a quasi-constant acoustic energy over a radiating semi-circle, at every frequency. Moreover, the response curve is kept when one switches from 1 to 3 m distance, quite an uncommon feature for conventional domes. The KEVLAR cap is associated with an ultralight surround made of coated foam for a perfect decoupling of the frame. The thickness of the front panel, out of anti-vibratory material, is no less than 4.5 mm. It is necessary to embed these tweeters in the baffle using a 5 mm rabbet.

All FOCAL tweeters exhibit a high output and are animated by enormous magnets (total weight from 0.5 to 1.9 kg), providing fantastic accelerations. The T90K and T120K differ by their respective outputs and by a lower limitation of use fixed at 2 kHz and 3 kHz respectively. The T122K differs from the T120K by a decompression of the pole piece and the inner cavity of the magnet, as well as a damper at the rear of the dome. The T122K can be used at a very low frequency, as from 1.5 kHz. Finally, the T130K is basically a T122K with its inner decompressions, which has been added a second magnet at the rear and, at the front, two acoustic impedance regulating units in the shape of a quarter sphere. The power handling is enhanced and the response curve becomes ultra-linear as from 4 kHz.



SPECIFICATIONS	T 90 K	T 120 K	T 122 K	T 130 K	PARAMETERS	T 90 K	T 120 K	T 122 K	T 130 K
Rated power handling									
Nominal / program (W)	10 / 75	10 / 100	10 / 100	10 / 100	Fs (Hz)	896	647	412	600
Voice coil					Vas (m ³)	-	-	-	-
Diameter / length (mm)	20 / 2,2	20 / 2,2	20 / 2,2	20 / 2,2	Qts	0,88	0,47	0,29	0,43
Nominal / mini Impedance (Ω)	8 / 7,5	8 / 7,5	8 / 7,5	8 / 7,5	Qes	1,16	0,57	0,36	0,53
DC resistance (Ω)	6	6	6	6	Qms	3,70	2,65	1,56	2,29
Inductance (mH)	0,08	0,09	0,09	0,09	Zmax (Ω)	31	32	20,2	25
Former	Aluminium	Aluminium	Aluminium	Aluminium	Xmax (mm)	-	-	-	-
Layers	2	2	2	2	Sd (m ²)	-	-	-	-
Wire	Copper	Copper	Copper	Copper	Vd (cm ³)	-	-	-	-
Cone	Kevlar	Kevlar	Kevlar	Kevlar	Cms (m/N).10 ⁻³	0,27	0,27	0,27	0,27
Surround	Coat.foam	Coat.foam	Coat.foam	Coat.foam	Mms (kg)	-	-	-	-
Magnet					Rms (kg/s)	-	-	-	-
Diameter (mm)	72	96	96	96	Bl (N/A)	2,8	3,4	3,4	3,4
Weight (g)	250	700	700	1000	Γ (mS ⁻² A ⁻¹)	10340	12590	12590	12590
Flux density (T)	1,45	1,85	1,85	1,88	N (%)	-	-	-	-
Air gap volume (cm ³)	0,084	0,084	0,084	0,084	NO (dB/1W/1m)	-	-	-	-
Sensitivity									
Nominal / > 200 Hz (dB)	92	93	93,5	95					
Net weight (kg)	0,51	1,33	1,31	1,85					