



# 33 F-ZBX/DD

## 33 F-ZBX/DD, 13" High Fidelity woofer with Dynamic Damping.

*Chassis: aluminium alloy, injection moulded, black.*

*Surround: foam.*

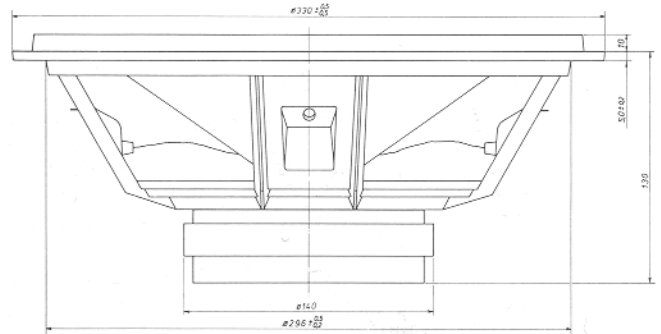
*Cone: paper, coated.*

*Dust Cap: paper, inversely mounted.*

*Mounting holes: 8 x 5 mm, equispaced on PCD 319 mm*

The 33 F-ZBX/DD is characterized by high efficiency, high power handling capacity, low distortion level and excellent transient response capability. It is specially designed for use in bass reflex systems.

The Dynamic Damping (patented) improves low bass transient quality at high power levels. The unit has therefore a substantial capability of handling large power peaks in the bass region.

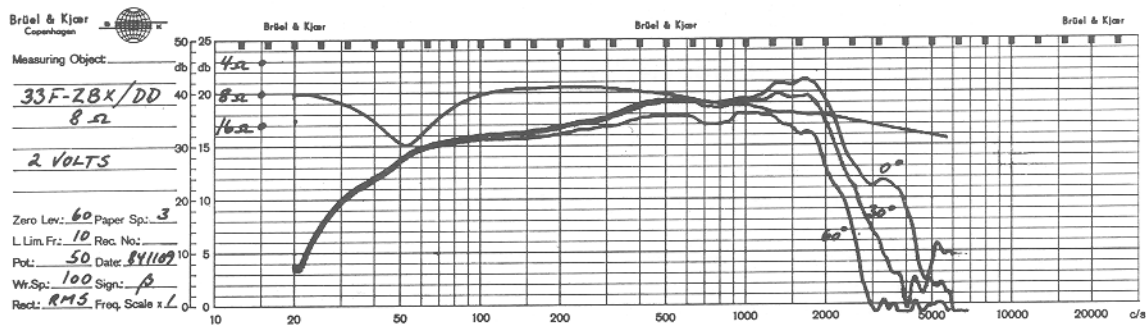


Technical data:		8 ohms	
Recommended frequency range	30 - 1000 Hz	Voice coil inductance	2,2 mH
Nominal power (DIN 45573)	120 W	Voice coil resistance	6,3 ohms
Music power (DIN 45 500)	200 W	Effective diaphragm area	550 cm <sup>2</sup>
Characteristic sensitivity (1m, 1w)	93 dB SPL	Moving mass	52 g
Operating power (DIN 45500)	2,0 W	Air load mass in baffle	7 g
Voice coil diameter	50 mm	Free air resonance	25 Hz
Voice coil height	18 mm	Mechanical suspension resistance	5,8 Ns/m
Air gap height	8 mm	Thiele - small parameters	
Flux density	1,3 T	Vas	291 litres
Force factor	13 Wb/m	Qms	1,6
Recommended enclosure volumes:		Qes	0,35
Closed cabinet	50 - 100 litres	Qts	0,28
Bass reflex cabinet	70 - 100 litres		
Weight	4,6 kg		
Magnet weight	1,2 kg		

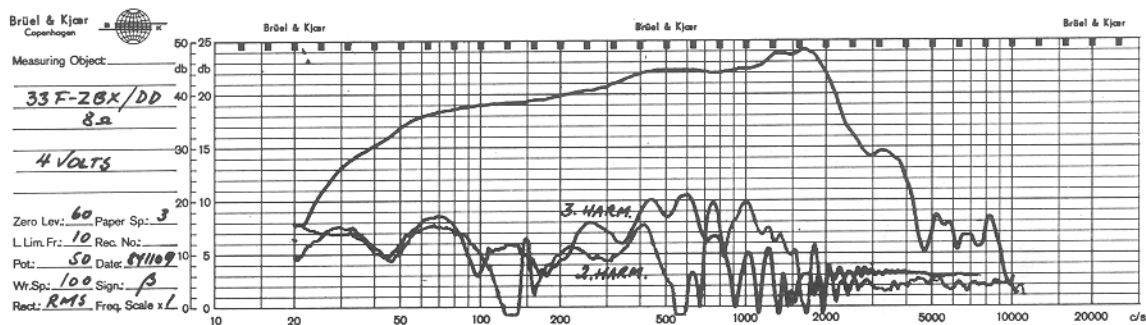
NOTES:

Response curves recorded in anechoic chamber (Free-Field,  $4\pi$ -radiation) with 0.5 m microphone distance.  
The loudspeaker is mounted in a closed box of 50 l net volume:

A Sound pressure on and off axis, and impedance:

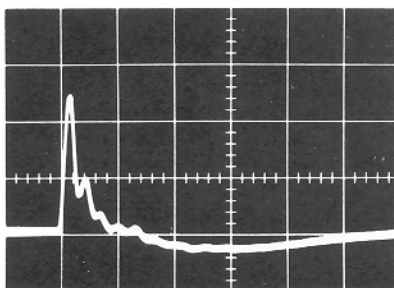


B Sound pressure and distortion on axis. The distortion components are raised by 20 dB:



C Sound pressure response to 4 Volts step function:

Sound pressure  
1.12 Pa/div



2ms/div Time →

**seas**

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Note: New telex no. 78419 SEAS N from June 20. 1985