

Oberton 12 CX1



KEY FEATURES:

- 99 db SPL 1W / 1m (LF) average sensitivity
- 65 mm (2.5") high temperature voice coil (LF)
- 600 W AES program power (LF)
- Triple aluminium demodulating rings
- Single magnet assembly
- Double silicon spider
- Water protected cone
- 1" exit HF compression driver
- 44 mm (1.75") HF high temperature voice coil
- 80 degrees nominal dispersion

Application: Stage monitors and compact bass reflex boxes.

The 12CX1 is a 12" / 1" coaxial transducer designed for use in compact reflex enclosures and stage monitors with a nominal dispersion of 80 degrees. The low profile, smooth curvilinear LF cone provides smooth response within its intended frequency range and water prove protective coating, allowing application in a wide range of environments. The state-of-the-art 65 mm (2.5 in) LF voice coil has Kapton former, which together with high temperature resistant resin ensure high reliability by high power.

A triple aluminium demodulating rings on the magnet structure reduce distortion and inductance and improve transient response.

The 1" exit compression driver adopted is our D2544 model. The HF driver diaphragm assembly, using triple layer polyester dome this together with phasing plug improve linearity of frequency response in high end.

Because of design with single magnet assembly the speaker has light weight and compact size.

SPECIFICATIONS

Nominal diameter	315 mm (12 in)
Impedance	LF 8 Ohm /HF 16 Ohm
Minimum impedance LF	5.86 Ohm
Frequency range	60 - 16000 Hz
Dispersion angle	80 deg

LF unit

Sensitivity (200-1000 Hz)	99 dB
Power Capacity AES ¹	300 W
Program Power ²	600 W
Voice Coil Diameter	65 mm (2.5 in)
Voice Coil Material	Cooper
Voice Coil Former	Kapton
Voice Coil Winding Depth	13 mm
Magnet Gap Depth	9 mm
Cone Material	Paper
Basket	Die Cast Aluminium
Magnet	Ferrite
Flux Density	1.00 T

HF unit

Minimum impedance HF	12.3 Ohms
DC resistance	10.6 Ohms
Sensitivity (1000-15000 Hz)	106 dB
Power capacity (1000-20000 Hz)	40 W
Program power	80 W
Voice coil diameter	44 mm (1.75 in)
Winding material	Aluminium
Diaphragm material	sandwich polyester
Flux density	1.8 T

THIELE-SMALL PARAMETERS

Resonance Frequency	57.58 Hz
Mechanical Efficiency Factor (Qms)	4.84
Electrical Efficiency Factor (Qes)	0.40
Total Q (Qts)	0.37
Equivalent Air Volume (Vas)	68.49 L
Diaphragm mass ind. airload (Mms)	41.27 g
Voice Coil Resistance Re	5.22 Ohms
Effective Diagram Area (Sd)	514.7 cm ²
Peak Linear Displacement of Diaphragm (Xmax)*	± 4.25 mm
Mechanical Compliance of Suspension (Cms)	0.185 mm/N
BL Product (BL)	13.94 T.m
V.C. Inductance at 1 kHz (Le)	0.737 mH

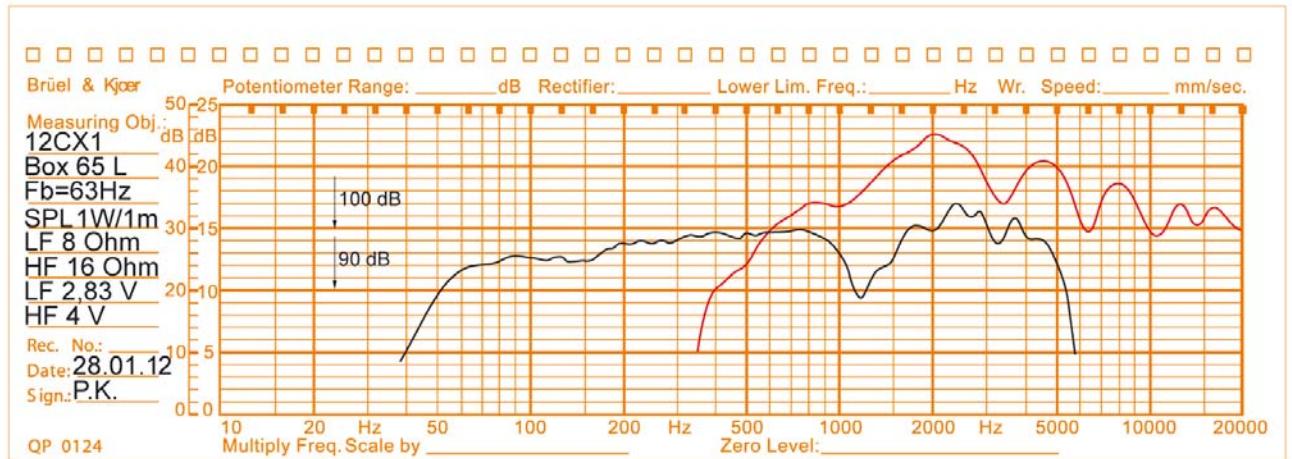
MOUNTING INFORMATION

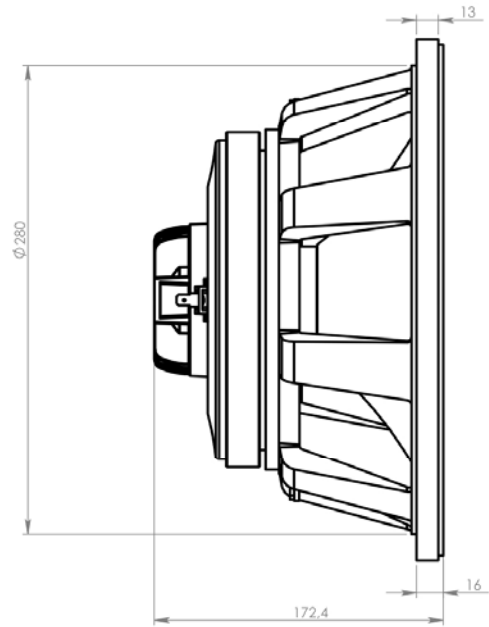
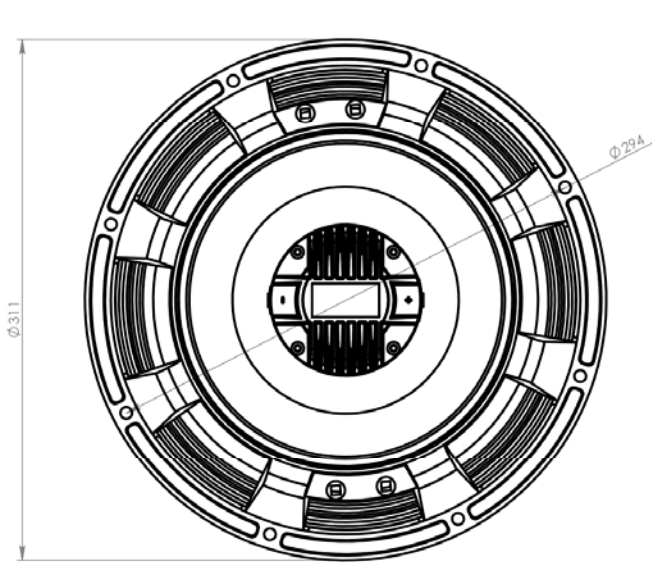
Overall diameter	310 mm (12 in)
Depth	173 mm
Baffle hole diameter	280 mm
Bolt circle diameter	294 mm
Number of mounting holes	8 with diam. 7 mm
Net weight	7.8 kg

1. AES standard. Power is calculated on rated minimum impedance. Measurement is in 65 L box enclosure tuned 63 Hz using a 40-400 Hz band limited pink noise test signal applied continuously for 2 hours.

2. Program power is defined as 3db greater than AES Power Capacity.

* Linear Mathematical Xmax is calculated as: $(Hvc - Hg)/2 + Hg/4$ where Hvc is the voice coil depth and Hg is the gap depth.





OBERTON	
model:	12CX1
Dimensions are in mm	Scale: 1:3