

## Oberton 8CX



### KEY FEATURES:

- 95 db SPL 1W / 1m ( LF ) average sensitivity
- 51 mm ( 2" ) high temperature voice coil ( LF )
- 400 W AES program power ( LF )
- Double aluminium demodulating rings
- Single magnet assembly
- Water protected cone
- 1" exit HF compression driver
- 44 mm (1.75") HF high temperature voice coil
- 100 degrees nominal dispersion

**Application:** Compact reflex boxes.

**Description:** The 8CX is a 8" / 1" coaxial transducer designed for use in compact reflex enclosures with a nominal dispersion of 100 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 51 mm (2 in) LF voice coil has Kapton former, which together with high temperature resistant resin ensure high reliability by high power.

A double aluminium demodulating rings reduce distortion and inductance and improve transient response.

The special cone made of cellulose with carbon fibers improves waterfall 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	210 mm (8 in)
Impedance	LF 8 Ohm /HF 16 Ohm
Minimum impedance LF	6.42 Ohm
Frequency range	70 - 20000 Hz
Dispersion angle	100 deg

### LF unit

Sensitivity (200-2000 Hz)	95 dB
Power Capacity AES <sup>1</sup>	200 W
Program Power <sup>2</sup>	400 W
Voice Coil Diameter	51 mm (2 in)
Voice Coil Material	Aluminium
Voice Coil Former	Kapton
Voice Coil Winding Depth	14 mm
Magnet Gap Depth	9 mm
Cone Material	Paper with carbon fibers
Basket	Die Cast Aluminium
Magnet	Ferrite
Flux Density	0.95 T

### HF unit

Minimum impedance HF	12.37 Ohms
DC resistance	10.6 Ohms
Sensitivity (1000-15000 Hz)	107 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	1.9 T

## THIELE-SMALL PARAMETERS

Resonance Frequency	76.07 Hz
Mechanical Efficiency Factor (Q <sub>ms</sub> )	4.28
Electrical Efficiency Factor (Q <sub>es</sub> )	0.44
Total Q (Q <sub>ts</sub> )	0.40
Equivalent Air Volume (V <sub>as</sub> )	16.84 L
Diaphragm mass ind. airload (M <sub>ms</sub> )	14.52 g
Voice Coil Resistance Re	5.68 Ohms
Effective Diaphragm Area (S <sub>d</sub> )	202 cm <sup>2</sup>
Peak Linear Displacement of Diaphragm (X <sub>max</sub> )*	+/- 5.25 mm
Mechanical Compliance of Suspension (C <sub>ms</sub> )	0.301 mm/N
BL Product (BL)	9.43 T.m
V.C. Inductance at 1 kHz (L <sub>e</sub> )	0.638 mH

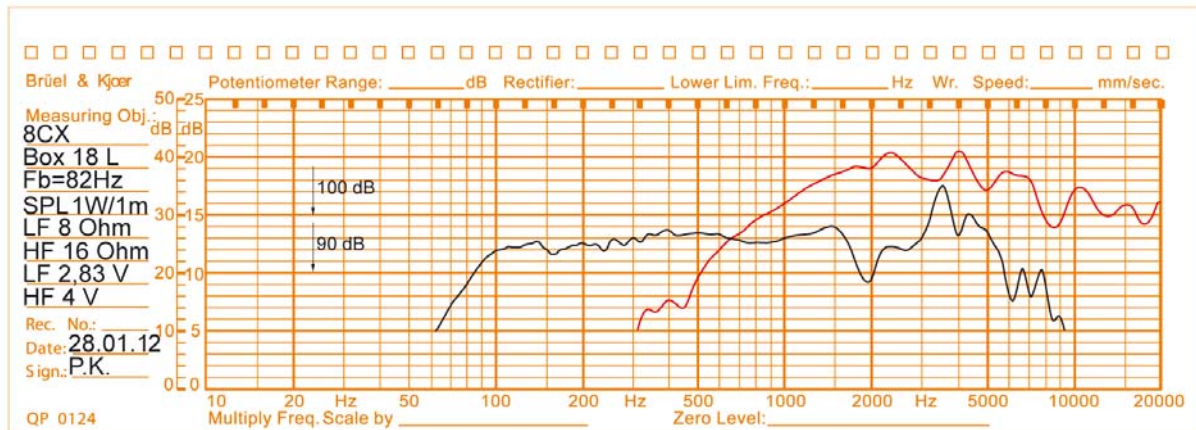
## MOUNTING INFORMATION

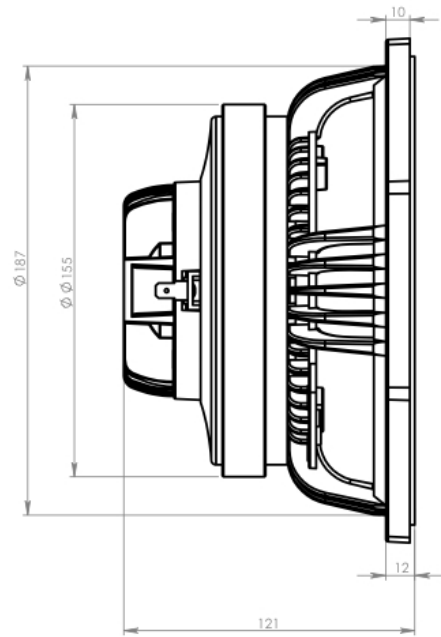
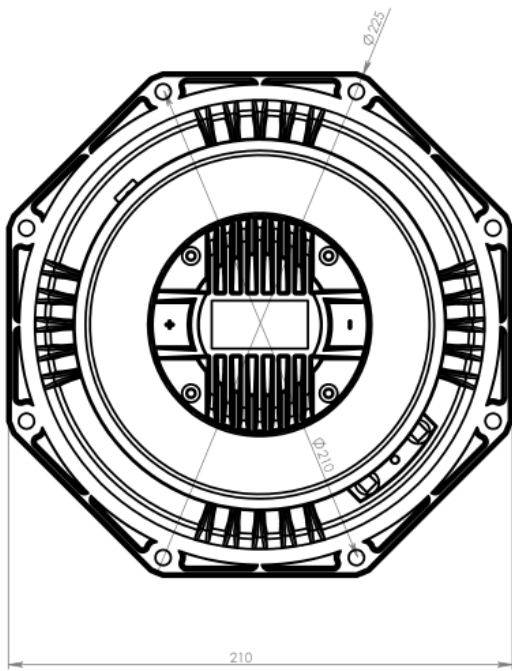
Overall diameter	225 mm (8 in)
Depth	121 mm
Baffle hole diameter	187 mm
Bolt circle diameter	210 mm
Number of mounting holes	8 with dia 6.5 mm
Net weight	4.5 kg

1. AES standard. Power is calculated on rated minimum impedance. Measurement is in 18 L box enclosure tuned 82 Hz using a 60-2000 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 X<sub>max</sub> is calculated as:  $(H_{vc} - H_g)/2 + H_g/4$  where H<sub>vc</sub> is the voice coil depth and H<sub>g</sub> is the gap depth.





**OBERTON**

model: 8CX

Dimensions are in mm

Scale: 1:2