



## S21IB

Extended LF Reflex Isobaric Subwoofer

Engineered using:  
2x18" Neodymium woofer – 18DS115 8 ohm  
1x21 Neodymium woofer – 21DS115 8 ohm

# EXTERNAL APPEARANCE



- Compact, lightweight design
- Extended low frequency output (-3db @ 28Hz)
- Low distortion due to isobaric loading
- Deep, punchy bass due to high motor strength
- Consistent behavior from low to high SPL
- Reduced electrical current requirements
- Flexible impedance – one or two channel operation
  - *All transducers must be identically powered, processed, & limited*

## COMPONENTS



- 2x 18DS115 8 ohm
- 1x 21DS115 8 ohm
- 2x Neutrik NL4MPR
- 56x M5 Wood T-Nuts (handles, grille, connector plate, feet)
- 24x M6 Wood T-Nuts (transducers)
- 56x TSEI M5x30 Stainless Steel Machine Screws (handles, grille, connector plate, feet)
- 24x TCEI M6x40 Stainless Steel Machine Screws (transducers)
- 4x Handles like Adam Hall 3400
- 4x Rubber feet like Adam Hall 4907
- Foam or Rubber gasket tape (transducer, handle, input plate contact points)
- Edilfiber or other non-flammable acoustic damping material  $\approx 3\text{cm}$  thick
- $2.5\text{mm}^2$  Stranded Copper Wire, twisted, for speaker electrical connections
- Waterproof wood glue like Titebond III
- Recommended Paint: Warnex Black Matte

Enclosure material: 15mm Birch plywood

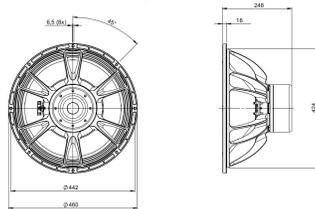
# Rear LF Transducers 18DS115



## 18DS115

8Ω

LF Drivers - 18.0 Inches



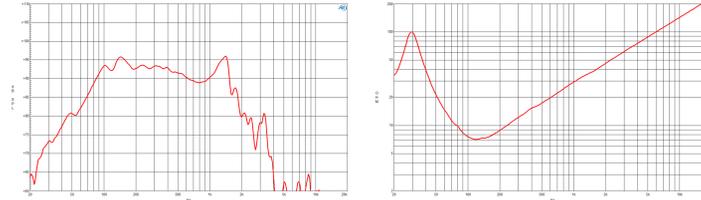
- 3400 W continuous program power capacity
- 116 mm (4.5 in) four layer aluminum voice coil
- 30 - 500 Hz response
- 98 dB sensitivity
- Double silicone spider with optimized compliance
- Ventilated voice coil gap for reduced power compression
- Aluminium demodulating ring for very low distortion



This next evolution subwoofer uses a new, longer, four layer aluminum voice coil. The result is more energy in the gap, less heat, higher sensitivity, higher power handling, lower distortion and better overall performance. The 18DS115 features a 40mm long, 4.5 inch diameter (116mm) Copper Clad Aluminum Wire voice coil. With a 1700watt AES power rating, 98 dB sensitivity, and over 14.0mm of Xvar, this high energy subwoofer is a significant step forward from similar models in the B&C range.

## 18DS115

LF Drivers - 18.0 Inches



### SPECIFICATIONS

Nominal Diameter	460 mm (18.0 in)
Nominal Impedance	8 Ω
Minimum Impedance	7.0 Ω
Nominal Power Handling <sup>1</sup>	1700 W
Continuous Power Handling <sup>2</sup>	3400 W
Sensitivity <sup>3</sup>	98.0 dB
Frequency Range	30 - 500 Hz
Voice Coil Diameter	116 mm (4.5 in)
Winding Material	Aluminium
Former Material	Glass Fibre
Winding Depth	40.0 mm (1.57 in)
Magnetic Gap Depth	14.0 mm (0.55 in)
Flux Density	0.8 T

### DESIGN

Surround Shape	Triple Roll
Cone Shape	Radial
Magnet Material	Neodymium Inside Slug
Spider	Double Silicone
Pole Design	T-Pole
Woofer Cone Treatment	TWP Waterproof Both Sides
Recommended Enclosure	100.0 dm <sup>3</sup> (3.53 ft <sup>3</sup> )
Recommended Tuning	40 Hz

### PARAMETERS<sup>4</sup>

Resonance Frequency	30 Hz
Re	5.0 Ω
Qes	0.21
Qms	4.3
Qts	0.2
Vas	168.0 dm <sup>3</sup> (5.93 ft <sup>3</sup> )
Sd	1210.0 cm <sup>2</sup> (187.55 in <sup>2</sup> )
η <sub>v</sub>	2.2 %
Xmax	± 16.5 mm
Xvar	± 14.0 mm
Mms	330.0 g
Bl	39.0 Txm
Le	3.85 mH
EBP	142 Hz

### MOUNTING AND SHIPPING INFO

Overall Diameter	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)
Baffle Cutout Diameter	422.0 mm (16.61 in)
Depth	248 mm (9.76 in)
Flange and Gasket Thickness	16 mm (0.63 in)
Air Volume Occupied by Horn	10.0 dm <sup>3</sup> (0.35 ft <sup>3</sup> )
Net Weight	12.0 kg (26.46 lb)
Shipping Units	1
Shipping Weight	13.6 kg (29.98 lb)
Shipping Box	500x495x275 mm (19.69x19.49x10.83 in)

### SERVICE KIT

Recone kit	RCK18DS1158
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1. 2 hours test made with continuous pink noise signal within the range Fs-10Fs. Power calculated on rated minimum impedance. Loudspeaker in free air.  
 2. Power on Continuous Program is defined as 3 dB greater than the Nominal rating.  
 3. Applied RMS Voltage is set to 2.83 V for 8 ohms Nominal Impedance.  
 4. Thiele-Small parameters are measured after a high level 20 Hz sine wave preconditioning test.

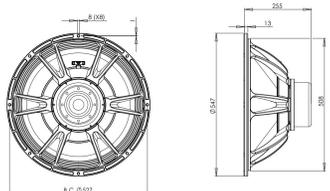
# Front LF Transducer: 21DS115



## 21DS115

LF Drivers - 21.0 Inches

8Ω



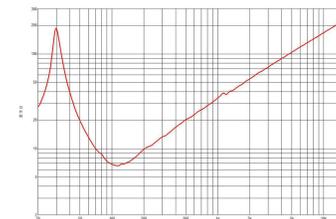
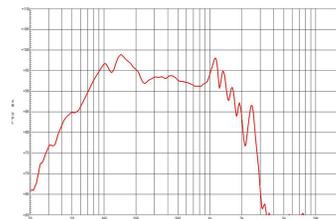
- 3400 W continuous program power capacity
- 116 mm (4.5 in) four layer aluminum voice coil
- 30 - 1000 Hz response
- 99 dB sensitivity
- Double silicone spider with optimized compliance
- Ventilated voice coil gap for reduced power compression
- Aluminium demodulating ring for very low distortion



This next evolution subwoofer uses a new, longer, four layer aluminum voice coil. The result is more energy in the gap, less heat, higher sensitivity, higher power handling, lower distortion and better overall performance. The 21DS115 features a 36 mm long, 4.5 inch diameter (116mm) Copper Clad Aluminum Wre voice coil. With a 1700watt AES power rating, 99 dB sensitivity, and over 16.5mm of Xvar, this high energy subwoofer is a significant step forward from similar models in the B&C range, even approaching the performance of our 6" voice coil alternatives.

## 21DS115

LF Drivers- 21.0 Inches



### SPECIFICATIONS

Nominal Diameter	530 mm (21.0 in)
Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
Nominal Power Handling <sup>1</sup>	1700 W
Continuous Power Handling <sup>2</sup>	3400 W
Sensitivity <sup>3</sup>	99.0 dB
Frequency Range	30 - 1000 Hz
Voice Coil Diameter	116 mm (4.5 in)
Winding Material	Aluminium
Former Material	Glass Fibre
Winding Depth	36.0 mm (1.42 in)
Magnetic Gap Depth	14.0 mm (0.55 in)
Flux Density	0.8 T

### DESIGN

Surround Shape	Triple Roll
Cone Shape	Radial
Magnet Material	Neodymium Inside Slug
Spider	Double Silicone
Pole Design	T-Pole
Woofer Cone Treatment	TWP Waterproof Both Sides
Recommended Enclosure	130.0 dm <sup>3</sup> (4.59 ft <sup>3</sup> )
Recommended Tuning	40 Hz

### PARAMETERS<sup>4</sup>

Resonance Frequency	30 Hz
Re	5.1 Ω
Qes	0.24
Qms	10.0
Qts	0.23
Vas	269.0 dm <sup>3</sup> (9.5 ft <sup>3</sup> )
Sd	1680.0 cm <sup>2</sup> (260.4 in <sup>2</sup> )
η <sub>v</sub>	3.0 %
Xmax	± 15.0 mm
Xvar	± 16.5 mm
Mms	407.0 g
Bl	40.8 Tm
Le	4.6 mH
EBP	125 Hz

### MOUNTING AND SHIPPING INFO

Overall Diameter	547 mm (21.54 in)
Bolt Circle Diameter	527 mm (20.7 in)
Baffle Cutout Diameter	508.0 mm (20.0 in)
Depth	255 mm (10.04 in)
Flange and Gasket Thickness	13 mm (0.51 in)
Air Volume Occupied by Horn	15.0 dm <sup>3</sup> (0.53 ft <sup>3</sup> )
Net Weight	14.8 kg (32.63 lb)
Shipping Units	1
Shipping Weight	17.1 kg (37.7 lb)
Shipping Box	570x570x320 mm (22.44x22.44x12.60 in)

### SERVICE KIT

Recone kit	RCK21DS1158
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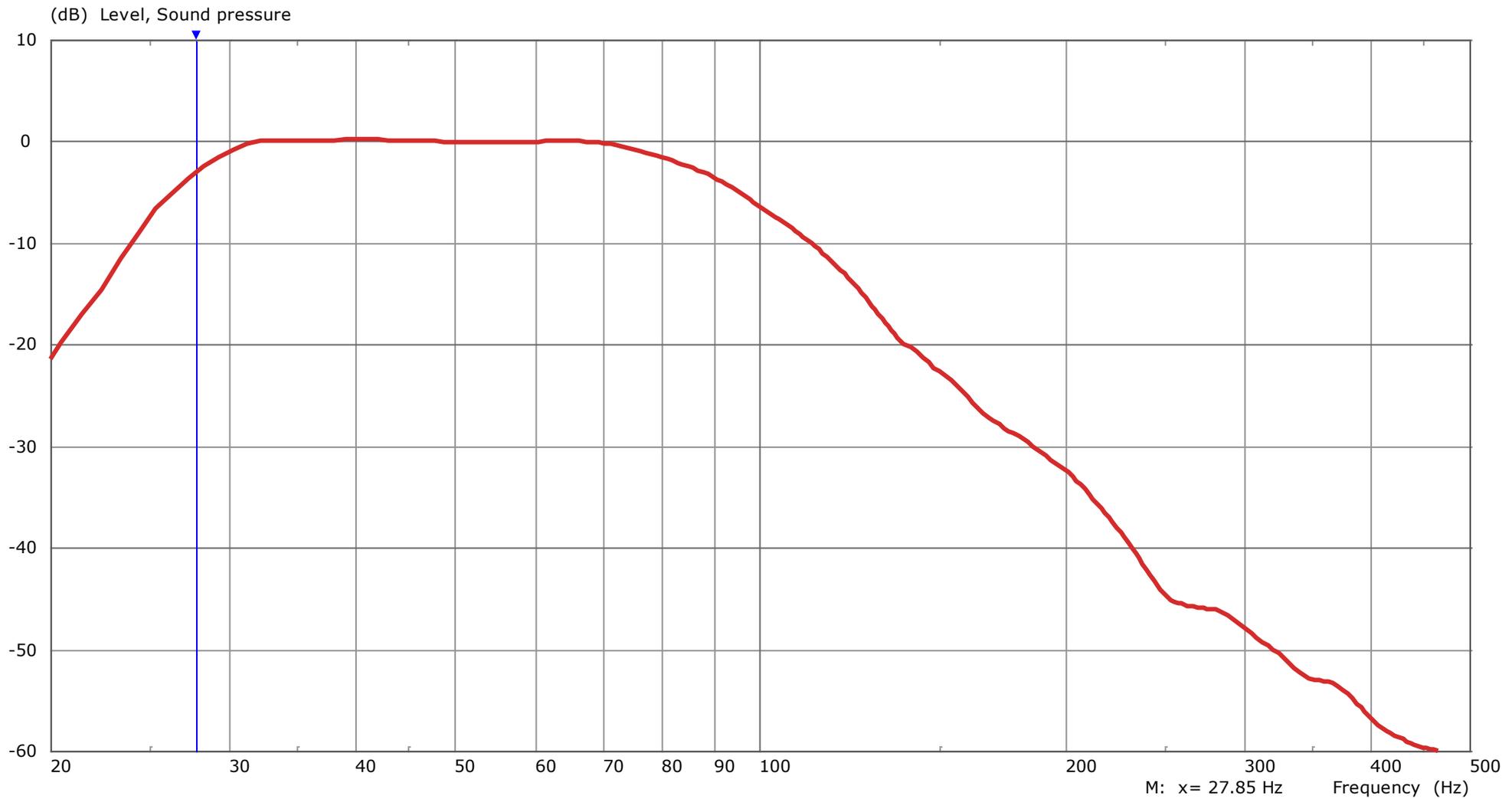
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2. Power on Continuous Program is defined as 3 dB greater than the Nominal rating.
3. Applied RMS Voltage is set to 2.83 V for 8 ohms Nominal Impedance.
4. Thiele-Small parameters are measured after a high level 20 Hz sine wave preconditioning test.

B&C Speakers s.p.a.

Via Poggiomoro, 1 - Loc. Vallina, 50012 Bagno a Ripoli (FI) - ITALY - Tel. +39 055 65721 - Fax +39 055 6572312 - mail@bcspeakers.com

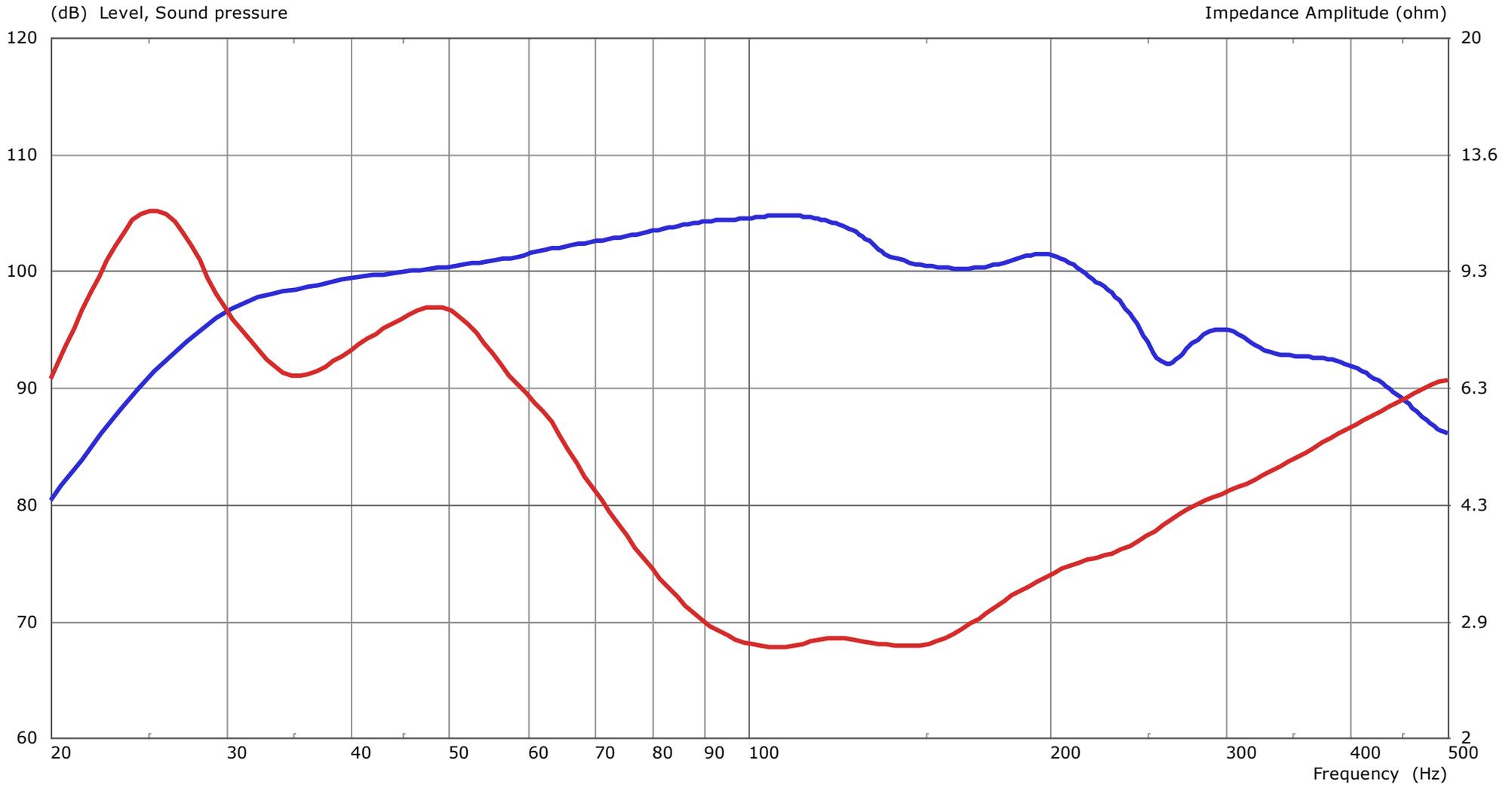
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Equalized Frequency Response

# MEASUREMENTS

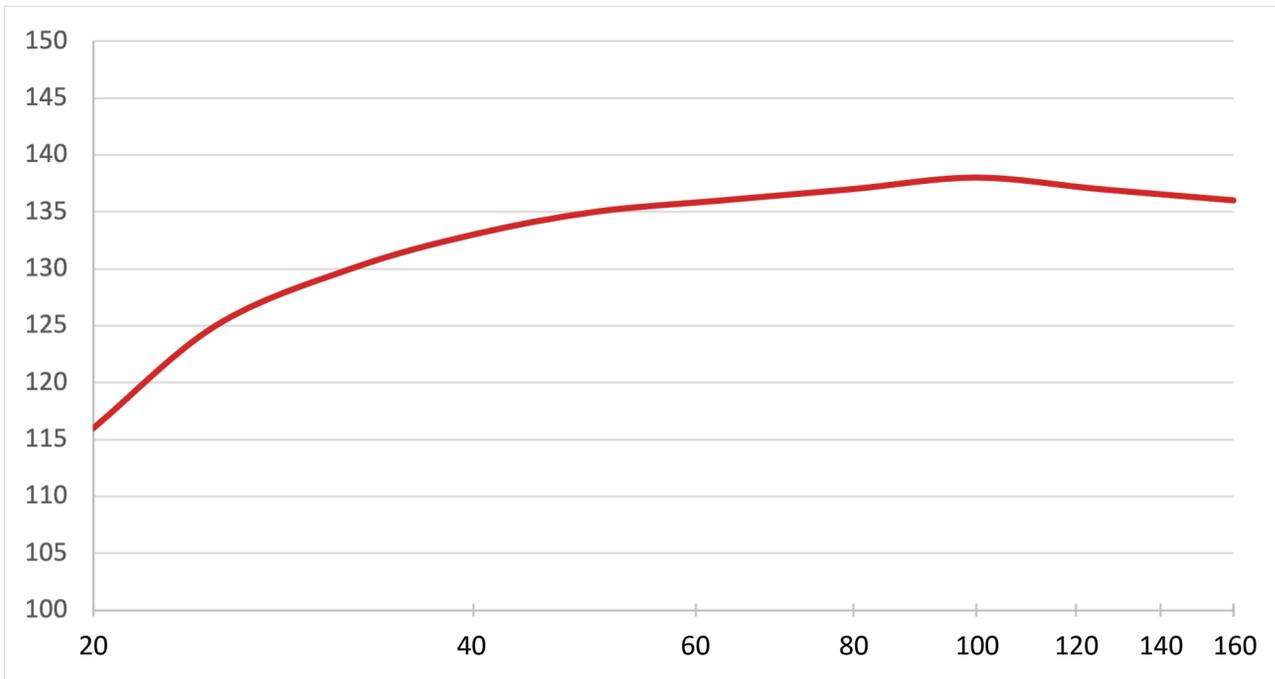


*Impedance & Unequalized Frequency Response (Normalized 1W @ 1M)*

# CEA2010B

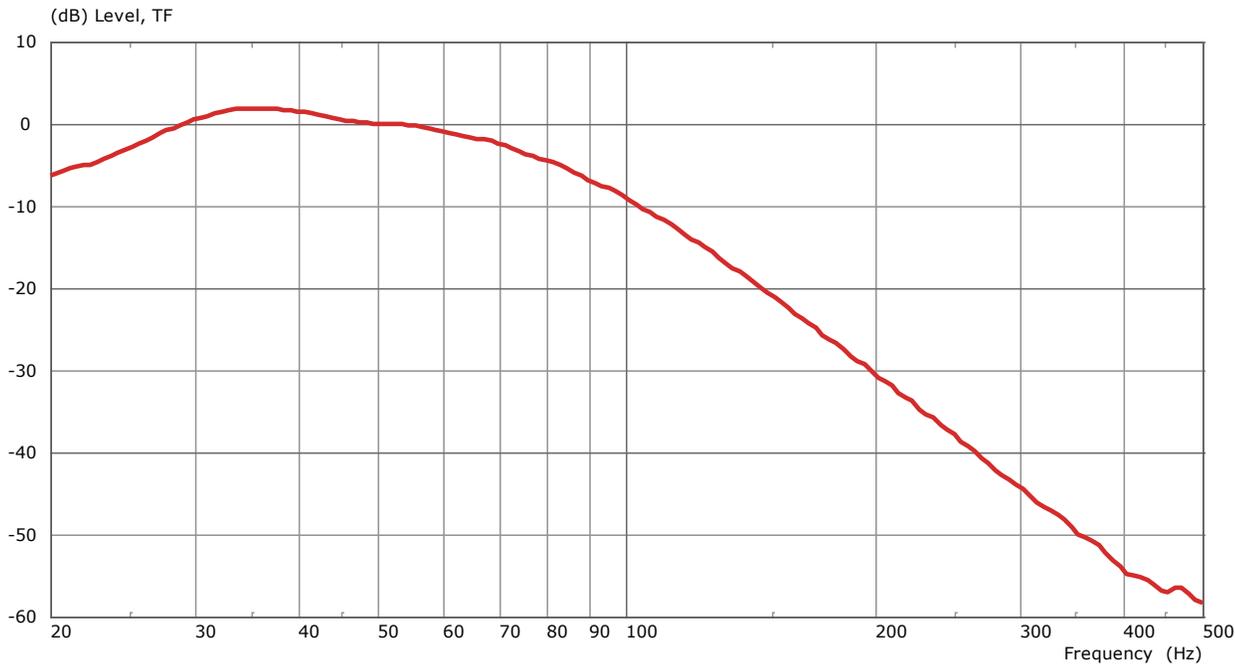


1mt in Half-Space



Tone Burst Center Frequency (HZ)	Weighted & Limited Maximum SPL (dB)
20	116
25	125
32	130
40	133
50	135
63	136
80	137
100	138
125	137
160	136

CEA2010B Broadband Peak SPL = 136dB @1mt in Half-Space



*Target Processing Transfer Function*

*Peaking: 34Hz +3dB Q=4*

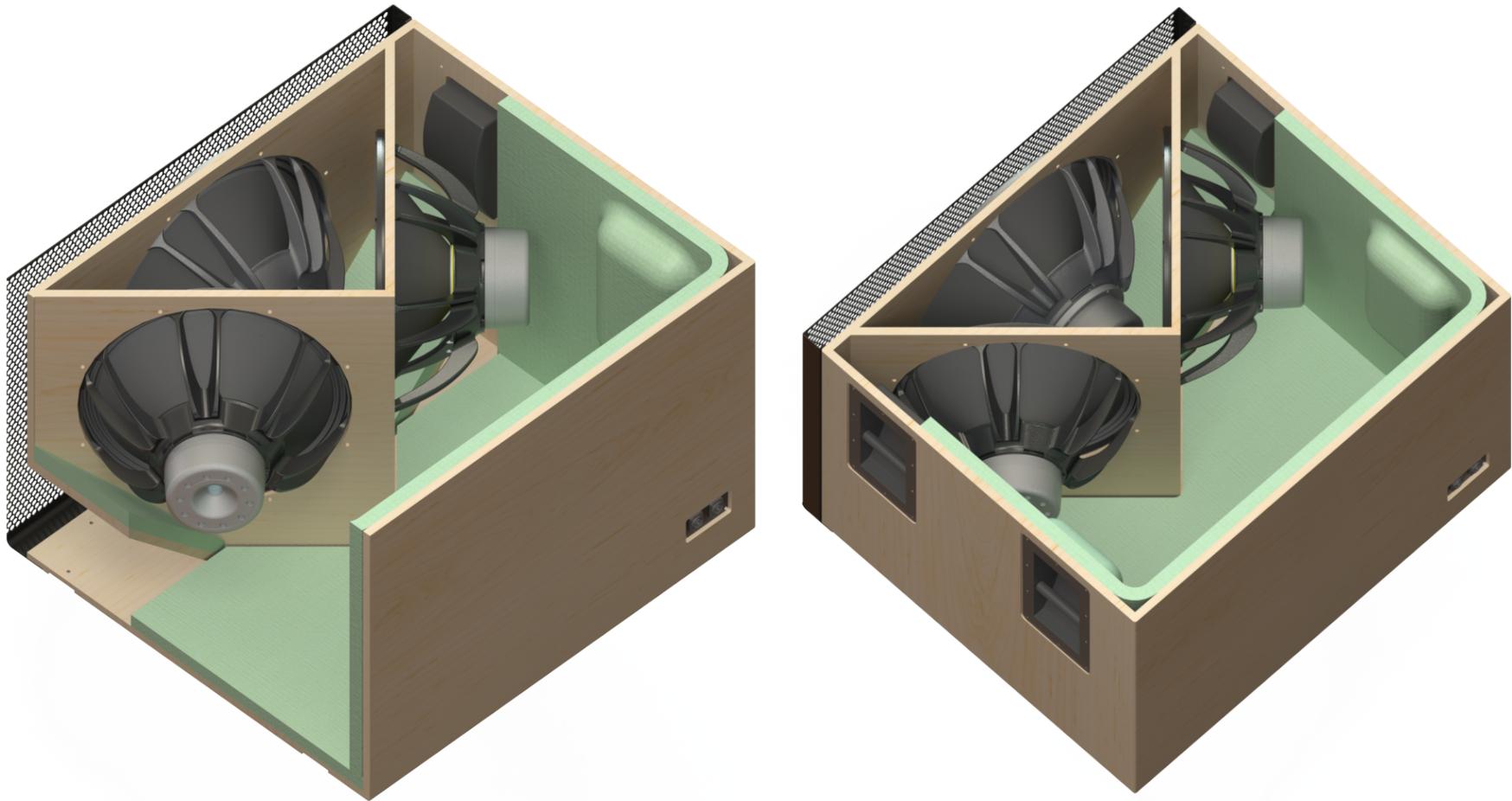
*HPF and LPF:*

*HPF: 30Hz – BTW 12dB/Oct*

*LPF: 80Hz – LR 24dB/Oct*

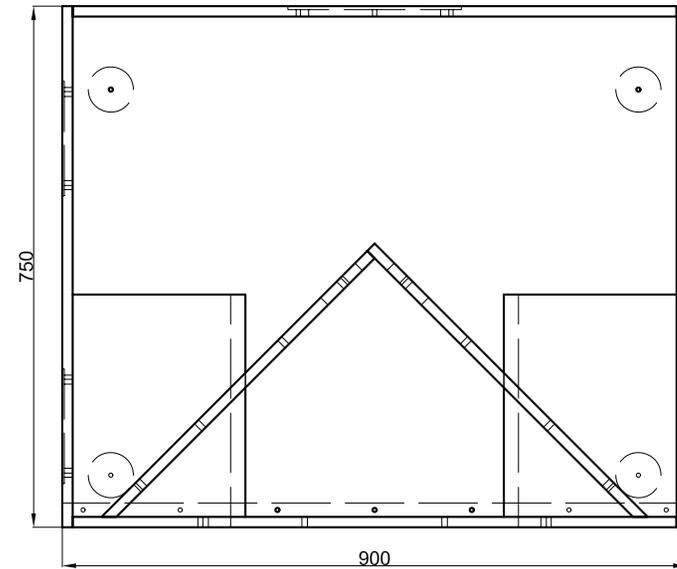
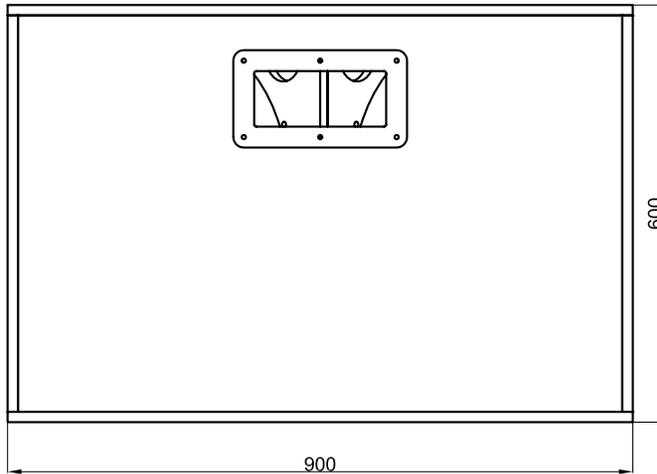
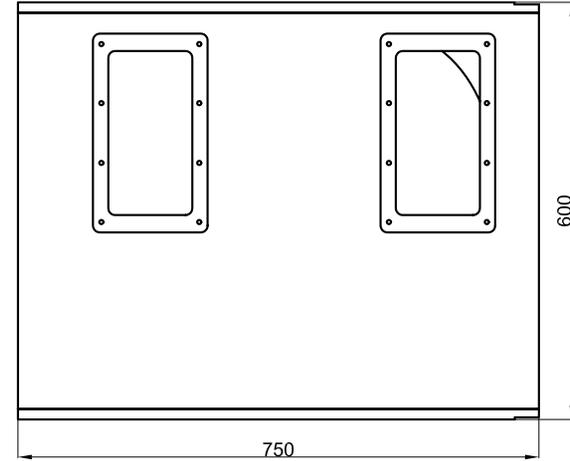
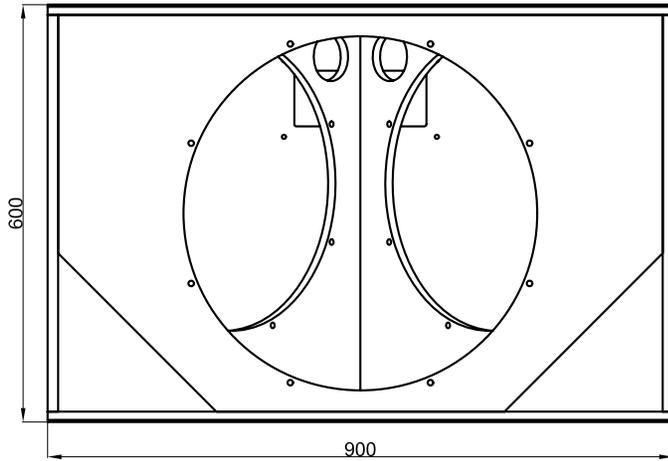
## DAMPING MATERIAL

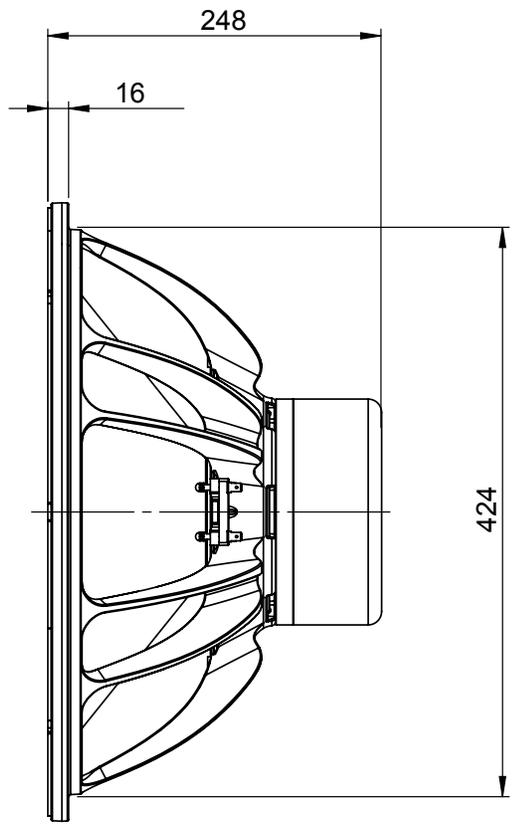
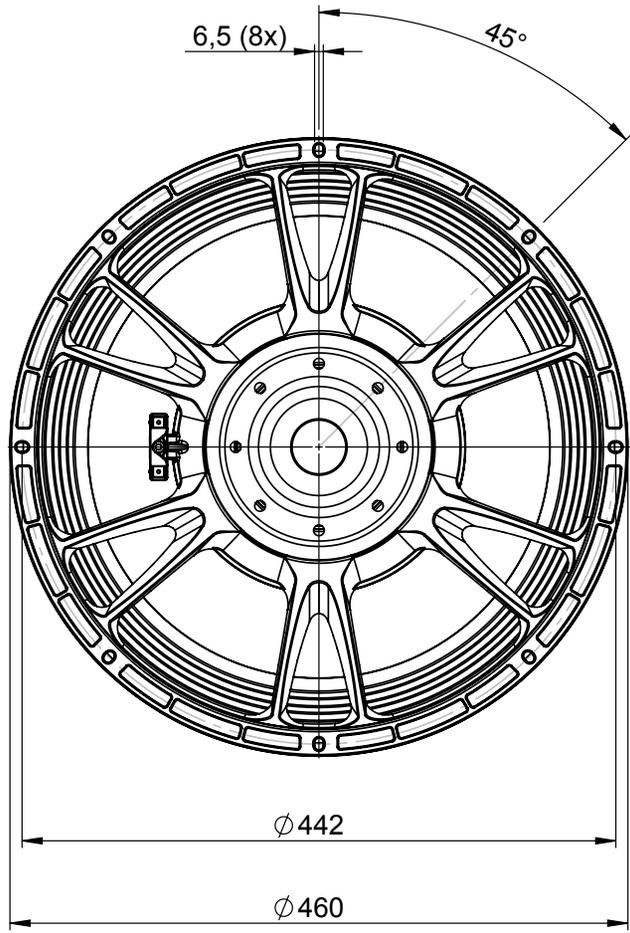
EDILFIBER (Polyester) 30Kg/m<sup>3</sup> – 30mm thick



*Apply to all surfaces which do not have a loudspeaker mounted to them, leave the ports free for airflow.*

# GLOBAL DIMENSIONS

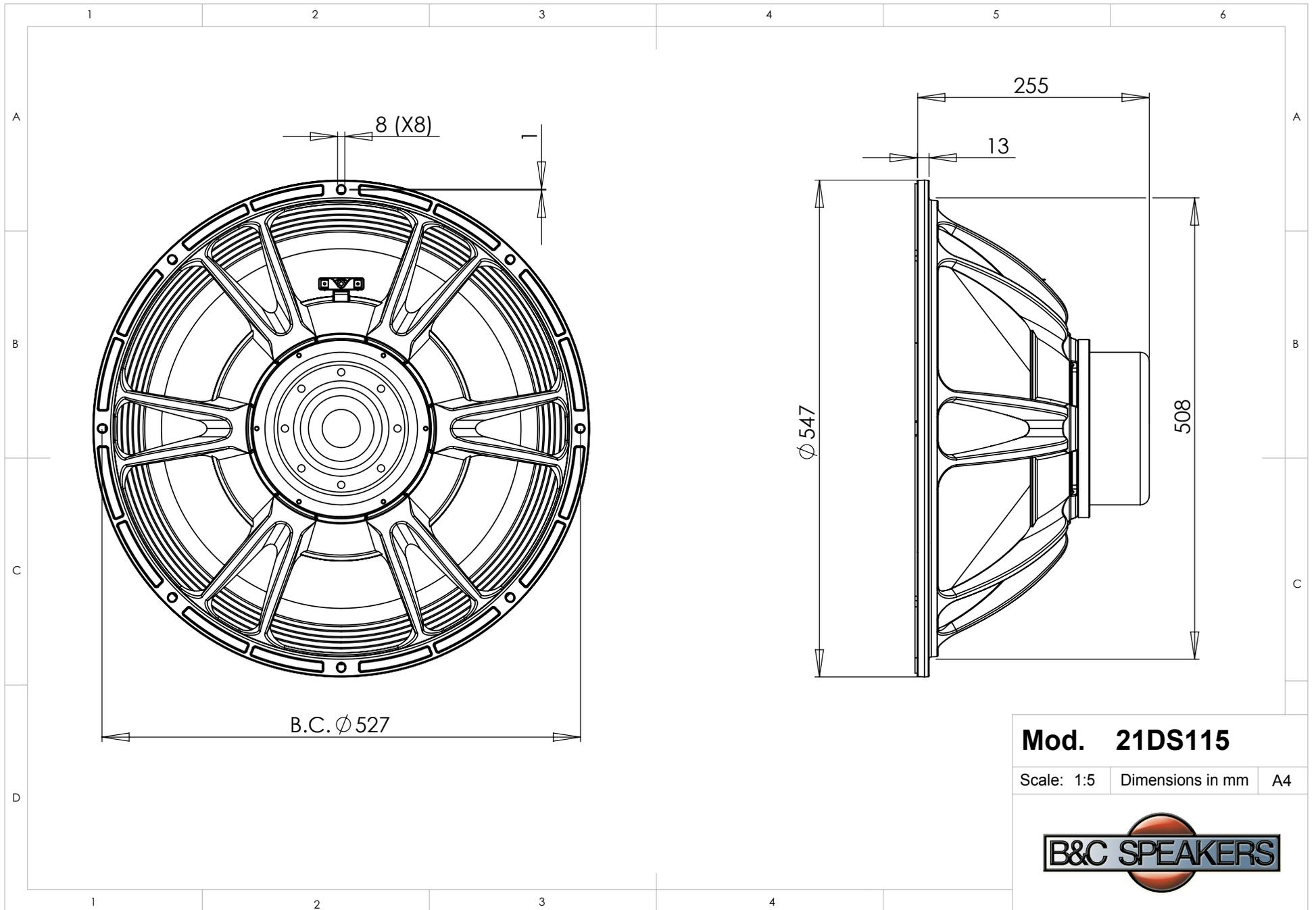




**Mod. 18DS115**

Scale: 1:5    Dimensions in mm    A4





**Mod. 21DS115**

Scale: 1:5    Dimensions in mm    A4

