



DCX-LA210

Long throw, 3 way, compact line array element

2x10" woofers – DCX354 high frequency coaxial driver

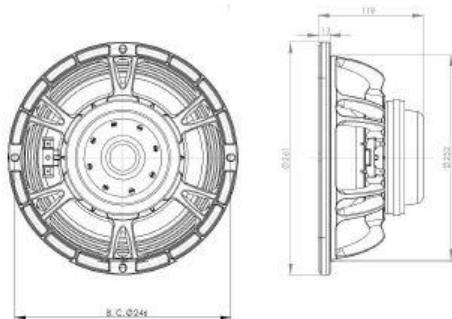


Woofer – 10NW76

10NW76

8Ω

LF Drivers - 10,0 Inches



- 800 W continuous program power capacity
- 76 mm (3 in) copper clad aluminum wire voice coil
- 65 - 3500 Hz response
- 96,5 dB sensitivity
- Neodymium magnet allows a very light yet powerful motor assembly
- Aluminium demodulating ring for very low distortion
- Ventilated voice coil gap for reduced power



SPECIFICATIONS

Nominal Diameter	250 mm (10.0 in)
Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
Nominal Power Handling ¹	400 W
Continuous power handling ²	800 W
Sensitivity (1W/1m) ³	96.5 dB
Frequency Range	70 - 2500 Hz
Voice Coil Diameter	76 mm (3.0 in)
Winding Material	Aluminium
Former Material	Glass Fibre
Winding Depth	18.5 mm (0.73 in)
Magnetic Gap Depth	11.0 mm (0.43 in)
Flux Density	1.2 T

MOUNTING AND SHIPPING INFO

Overall Diameter	258 mm (10.16 in)
Bolt Circle Diameter	245 mm (9.65 in)
Baffle Cutout Diameter	232.0 mm (9.13 in)
Depth	122 mm (4.8 in)
Flange and Gasket Thickness	10 mm (0.39 in)
Air Volume Occupied by Driver	1.6 dm ³ (0.06 ft ³)
Net Weight	3.2 kg (7.05 lb)
Shipping Units	1
Shipping Weight	3.8 kg (8.38 lb)
Shipping Box	295x314x175 mm (11.61x12.36x6.89 in)

DESIGN

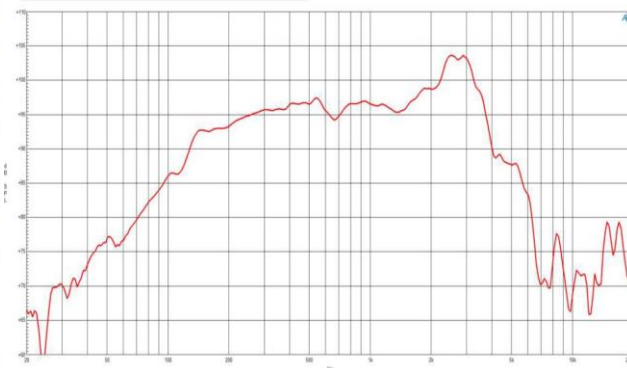
Surround Shape	Triple Roll
Cone Shape	Exponential
Magnet Material	Neodymium Inside Slug
Spider	Single
Pole Design	T-Pole
Woofer Cone Treatment	TWP Waterproof Both Sides
Recommended Enclosure	29.0 dm ³ (1.02 ft ³)
Recommended Tuning	70 Hz

PARAMETERS⁴

Resonance Frequency	71 Hz
Re	5.2 Ω
Qes	0.3
Qms	6.72
Qts	0.29
Vas	16.4 dm ³ (0.58 ft ³)
Sd	320.0 cm ² (49.6 in ²)
η _o	1.92 %
Xmax	± 6.5 mm
Xvar	± 7.0 mm
Mms	44.7 g
Bl	18.55 Txm
Le	1.14 mH
EBP	236 Hz

SERVICE KIT

Recone kit RCK10CLA768



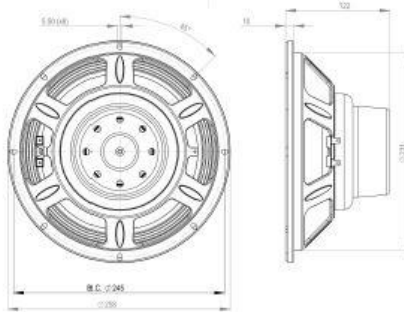
DCXLA210

Woofer – 10CLA76 *(lighter weight, cost effective option)*

10CLA76

8Ω

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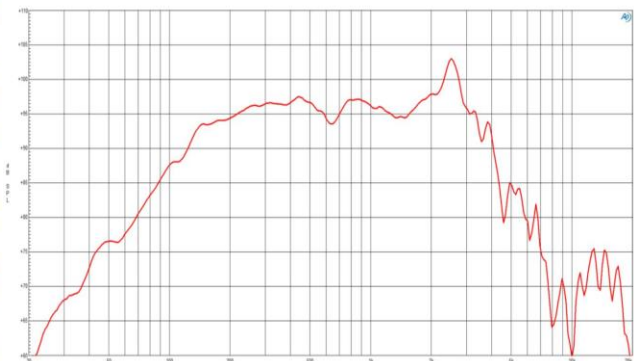
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Xmax	± 6.5 mm
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EBP	236 Hz

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Air Volume Occupied by Driver	1.6 dm ³ (0.06 ft ³)
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SERVICE KIT

Recone kit RCK10CLA768

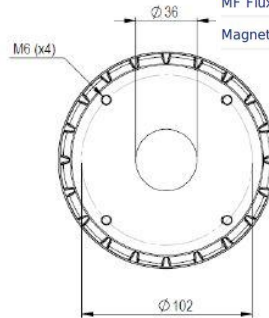
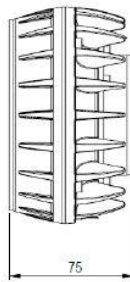
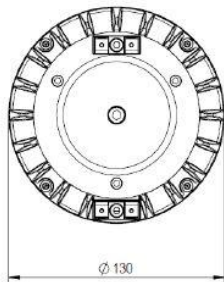


Coaxial Driver – DCX354 – 16ohm

DCX354

16Ω

Coaxials HF - 1.4 Inches

SPECIFICATIONS MF UNIT¹

MF Throat Diameter	36 mm (1.4 in)
Nominal Impedance	16 Ω
MF Minimum Impedance	12.0 Ω
MF Nominal Power Handling ²	90 W
MF Continuous Power Handling ³	180 W
Sensitivity (1W/1m) ⁴	112.7 dB
MF Frequency Range	0.4 - 6.0 kHz
MF Recommended Crossover ⁵	0.4 kHz
MF Voice Coil Diameter	76 mm (3.0 in)
MF Winding Material	Aluminum
MF Inductance	0.33 mH
Diaphragm Material	HT Polymer
MF Flux Density	1.93 T
Magnet Material	Neodymium Ring

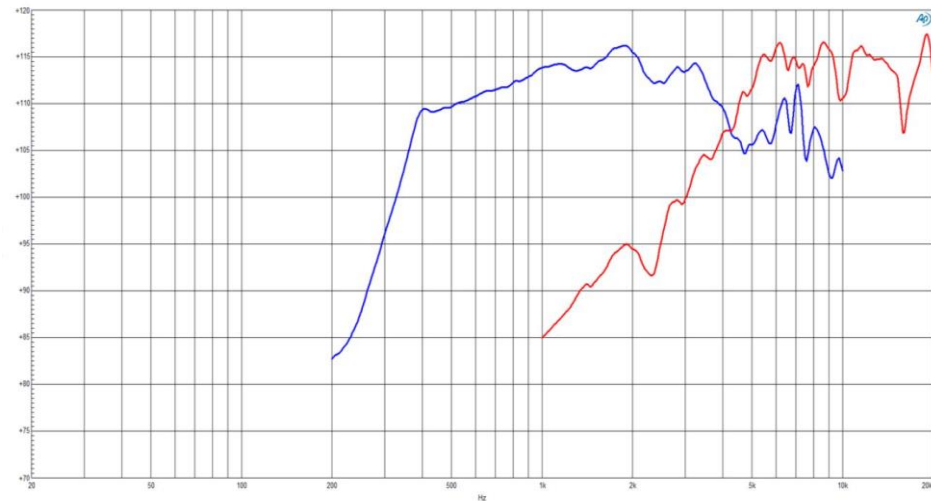
SPECIFICATIONS HF UNIT⁶

HF Throat Diameter	36 mm (1.4 in)
Nominal Impedance	16 Ω
HF Minimum Impedance	10.6 Ω
HF Nominal Power Handling ⁷	50 W
HF Continuous Power Handling ⁸	100 W
Sensitivity (1W/1m) ⁹	114.6 dB
HF Frequency Range	5.0 - 20.0 kHz
HF Recommended Crossover ¹⁰	4.5 kHz
HF Voice Coil Diameter	51 mm (2.0 in)
HF Winding Material	Aluminum
HF Inductance	0.15 mH
Diaphragm Material	HT Polymer
HF Flux Density	1.96 T
Magnet Material	Neodymium Inside Slug

MOUNTING AND SHIPPING INFO

Four M6 holes 90° on 102 mm (4") diameter	
Overall Diameter	130 mm (5.12 in)
Depth	73 mm (2.87 in)
Net Weight	2.5 kg (5.51 lb)
Shipping Units	1
Shipping Weight	2.7 kg (5.95 lb)
Shipping Box	170x170x140 mm (6.69x6.69x5.51 in)
Other Details	4x M6 Mounting Studs with bolts and washers included

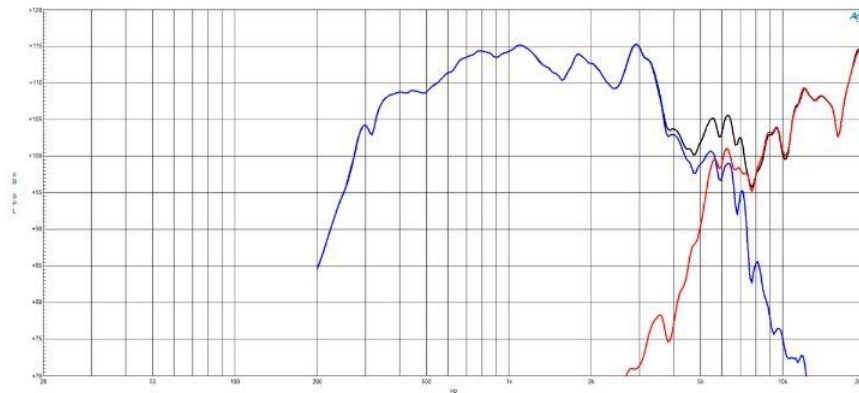
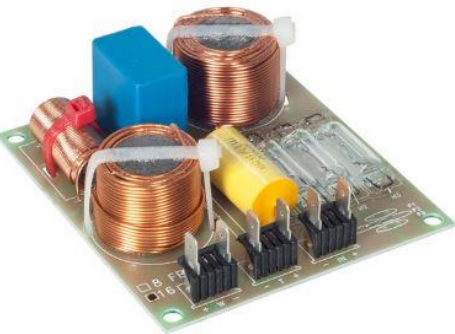
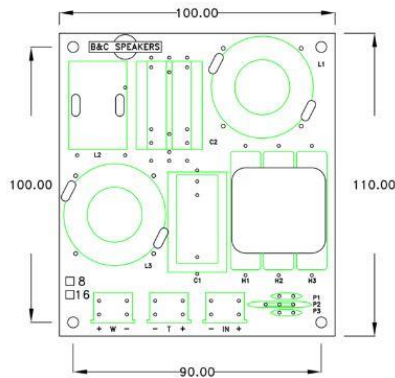
- Time coherent coaxial ring radiator design
- 1.4" horn throat diameter
- 112.2 dB MF sensitivity
- 114.3 dB HF sensitivity
- 400 - 20000 Hz response
- Neodymium magnet assembly



Passive filter for DCX354 – 16 ohm

FB35416

16 Ω Nominal Impedance	Two Way Filter Type
18.0 dB/oct Low-pass Slope	12.0 dB/oct High-pass Slope



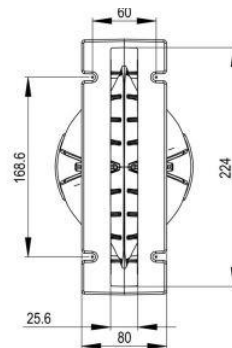
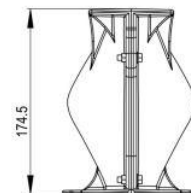
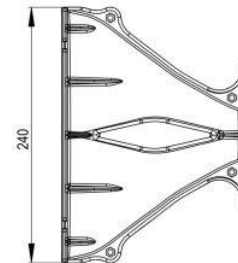
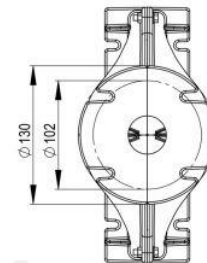
DCXLA210

Waveguide

ME148

Horns - 1.4 Inches

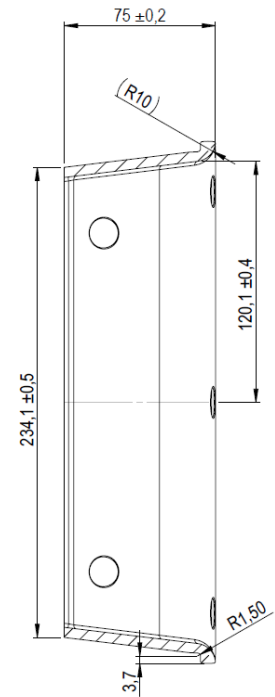
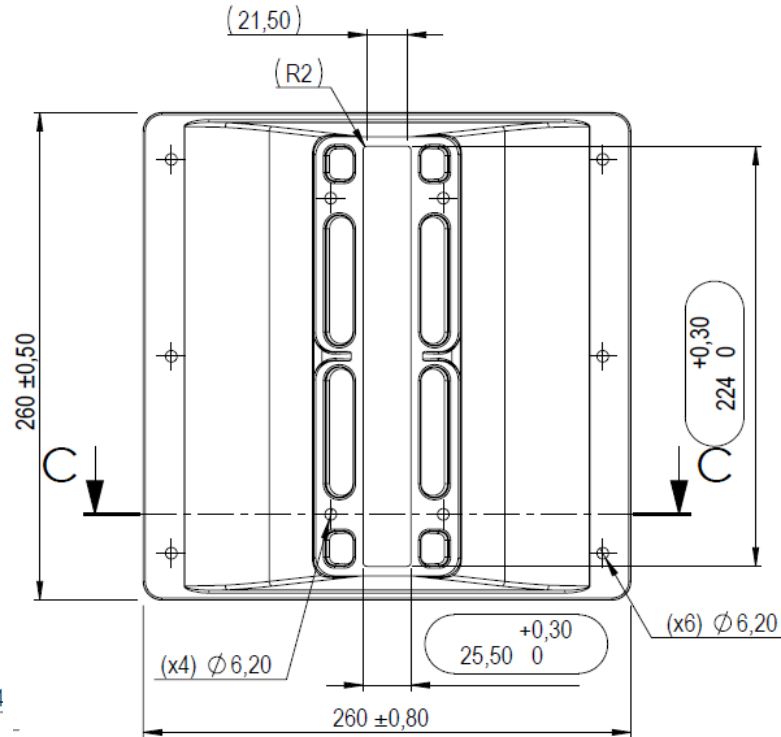
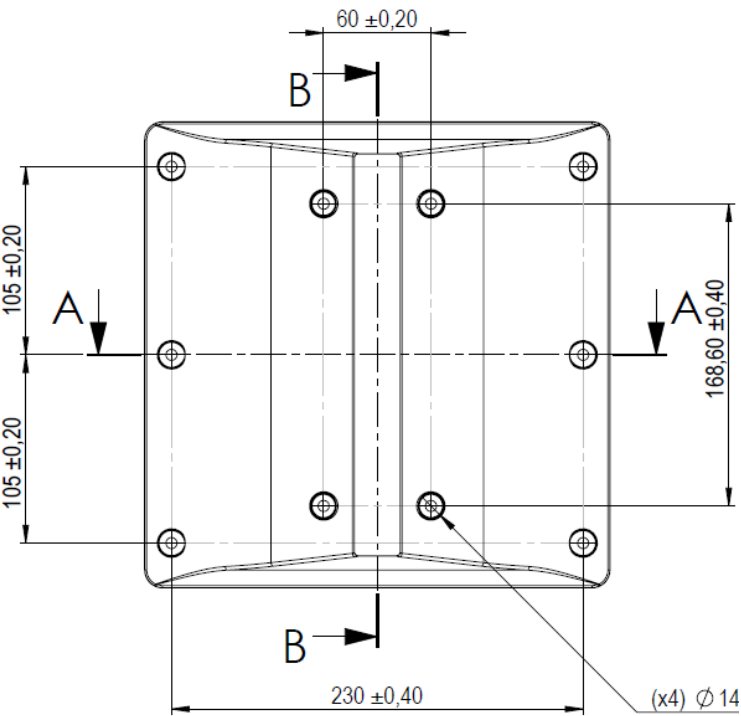
- 1.4" throat entry
- Line Array optimized Waveguide
- 120° max horizontal coverage
- Vertical coverage depends on configuration
- Very good loading down to 500 Hz
- Designed specifically for the extra octaves present in our coaxial compression driver





HF148

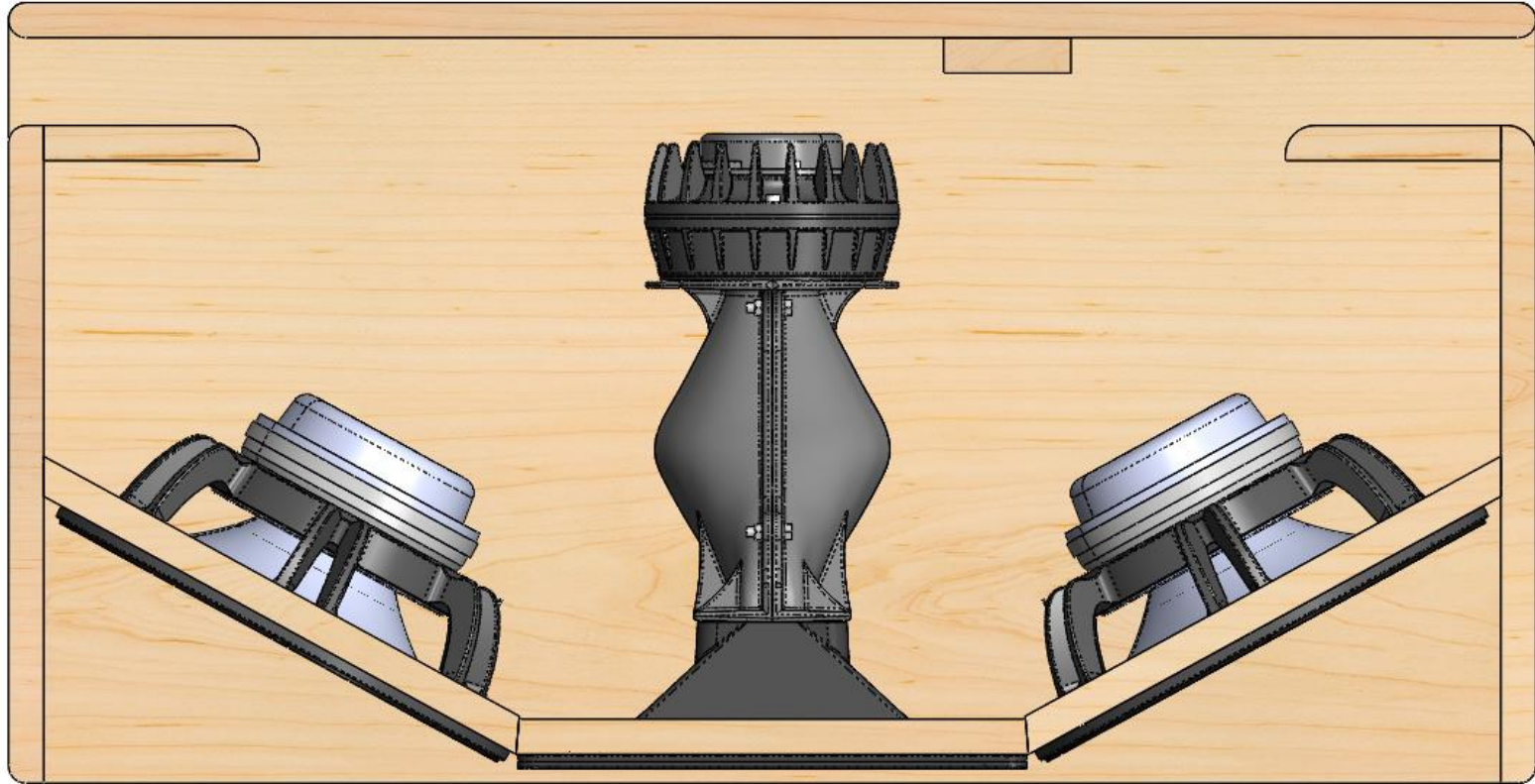
Exit flare for ME148 waveguide



- Made of high quality plastic - Perfect coupling with ME148
- 100° horizontal // 10° vertical coverage
- - M6 screws suggested

ENCLOSURE DESIGN

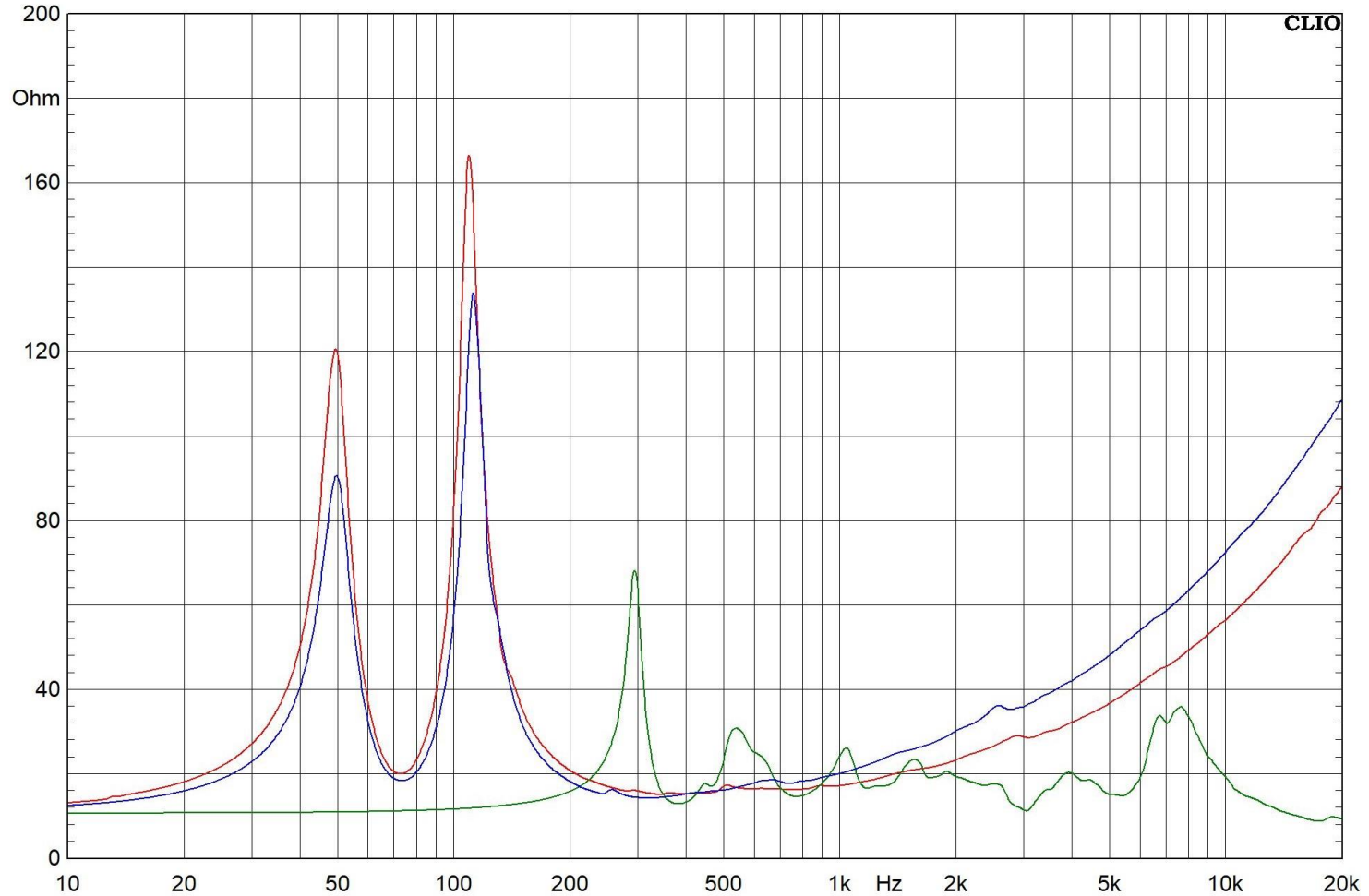
Upper internal view and notes



- 18mm Wood thickness (birch plywood suggested).
- - A good dampening material should be placed inside the cabinet, except the rear panel and the zones close to the ports.
- - M6 screws suggested for fixing the horn – M5 for the woofers.
- 2 amplifier channels.
- LF impedance: 16ohms (**woofers wired in series**).
- HF impedance: 16ohms (DCX354 has to be wired to the dedicated crossover properly).

MEASUREMENTS

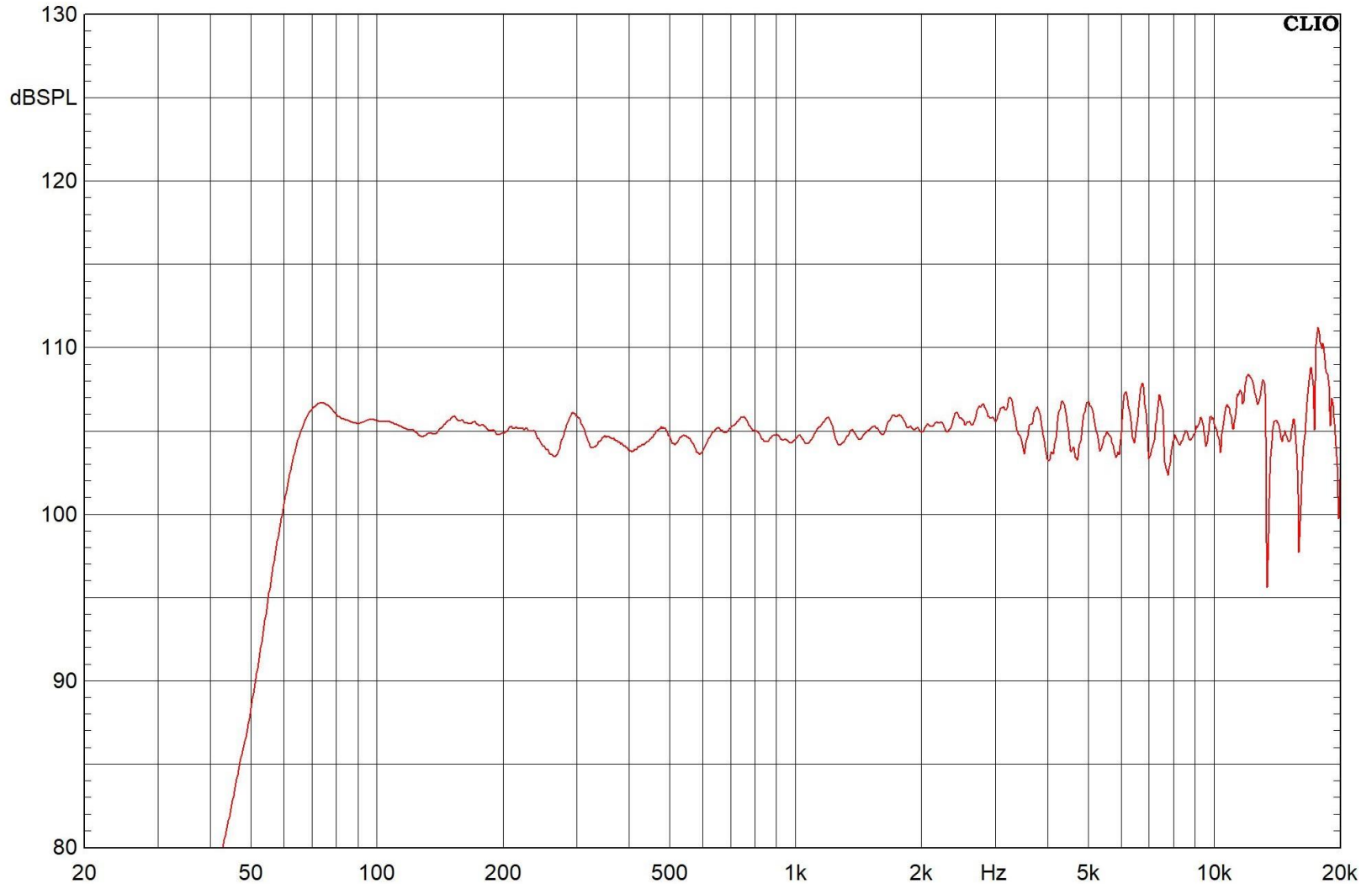
Impedance @-25dBu input



RED: 2x10NW76 wired in series - BLUE: 2x10CLA76 wired in series
GREEN: DCX354 connected to FB 354-16 passive filter

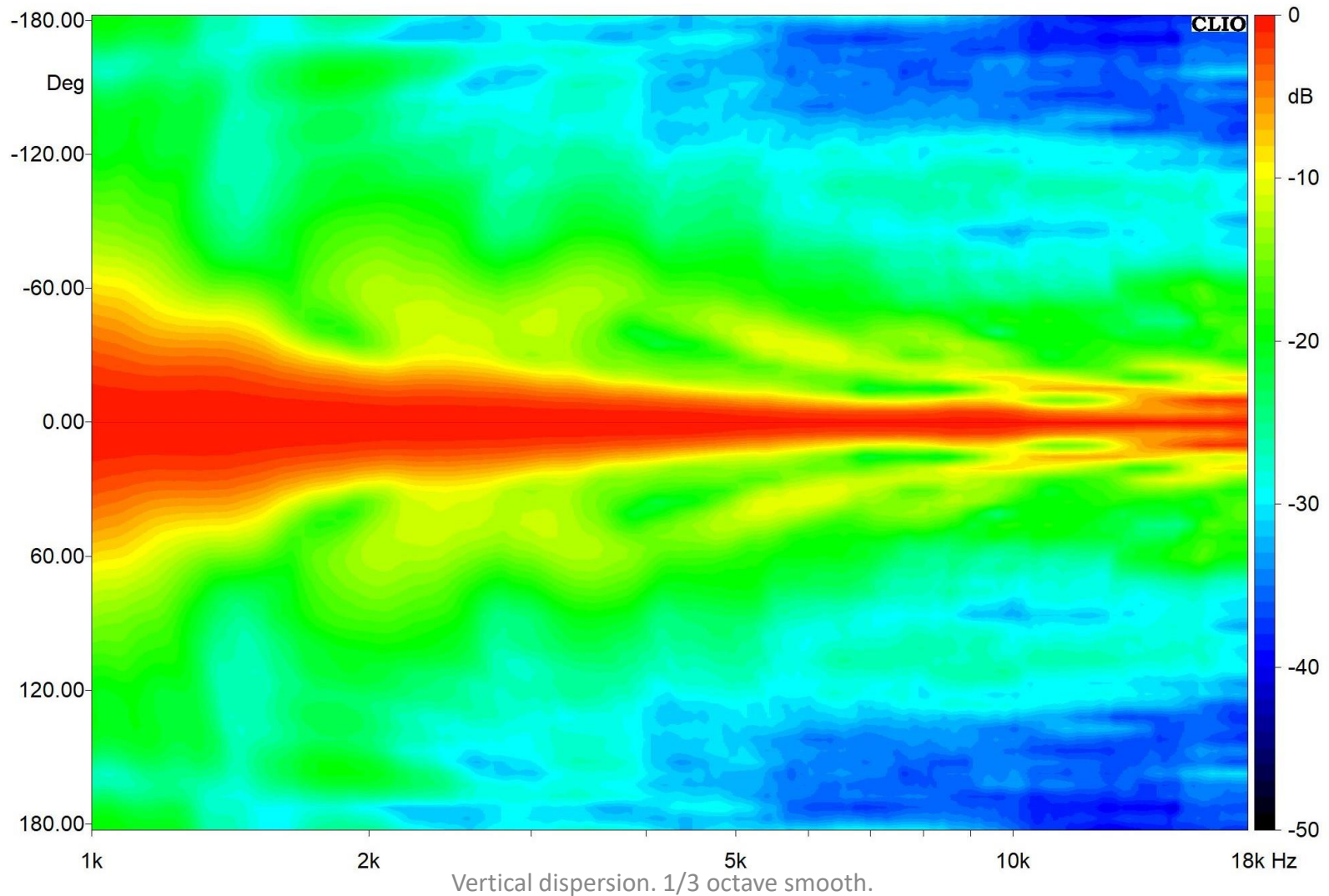
MEASUREMENTS

On axis frequency response measured @ 1 meter on single cabinet.



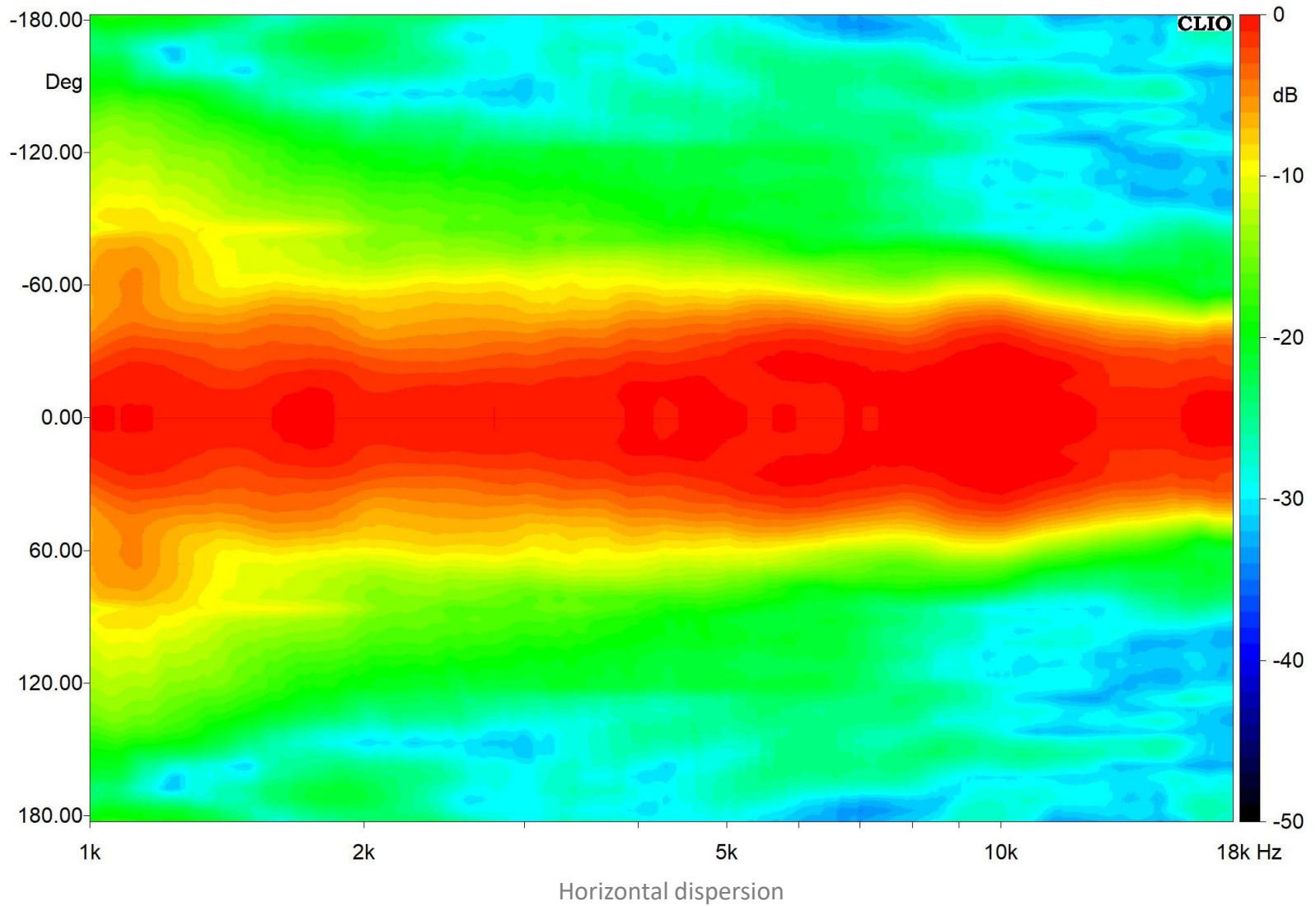
Polar maps

Directivity Index with Active dsp settings, measured @3meters on single cabinet.



Polar maps

Directivity Index with Active dsp settings, measured @3meters on single cabinet.



Active dsp settings – Low frequency part

3 to 6 cabinets (if more have to be mounted, eq must be checked in the far field)

Limiters (for both drivers):

70Volts RMS. Attack 1.5 seconds. Release 3 seconds

170Volts PEAK. Attack 8ms. Release 64ms

10NW76

In: 4dB // no delay

HPF: 55Hz – BTW 24dB/Oct

Peaking #1: +3dB – Q:2 – Frq:65Hz // Peaking #2: +2dB – Q:2 – Frq:120Hz

Peaking #3: -2dB – Q:3 – Frq:300Hz // Peaking #4: -3dB – Q:4 – Frq:550Hz

Peaking #5: -5dB – Q:5 – Frq:1500Hz

Low-shelving: +10dB – Q:0.5 – Frq:270Hz // Allpass: Q:2 – Frq:970Hz

LPF: 800Hz – BTW 24dB/Oct

10CLA76

In: 4dB // no delay

HPF: 55Hz – BTW 24dB/Oct

Peaking #1: +3dB – Q:2 – Frq:65Hz // Peaking #2: +2dB – Q:2 – Frq:120Hz

Peaking #3: -2dB – Q:2 – 185hz // Peaking #4: -2dB – Q:3 – Frq:300Hz

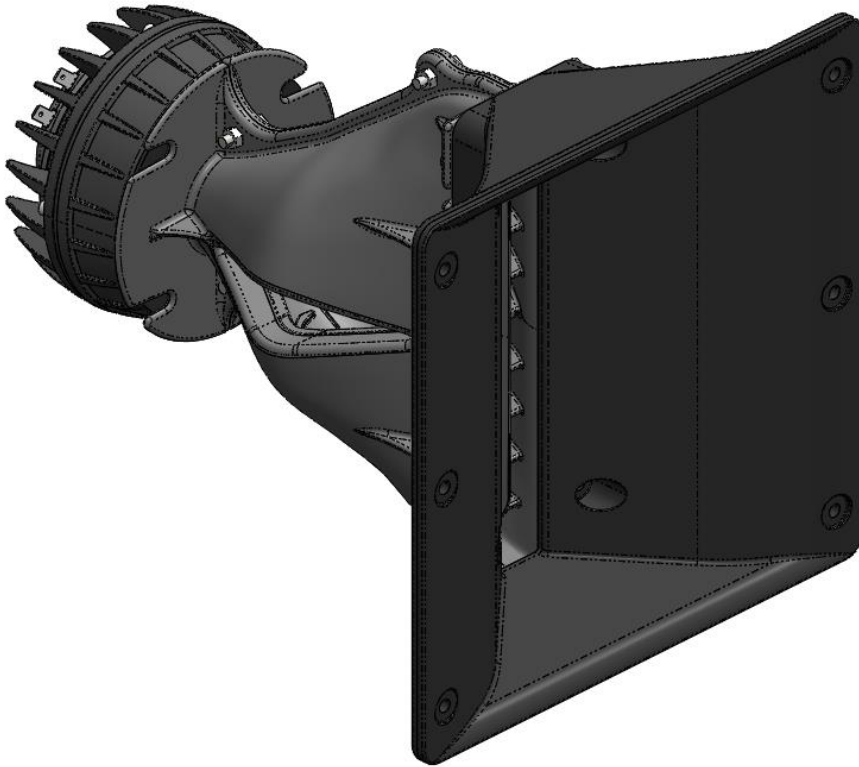
Peaking #5: -3dB – Q:4 – Frq:550Hz // Peaking #7: -5dB – Q:5 – Frq:1500Hz

Low-shelving: +10dB – Q:0.5 – Frq:270Hz // Allpass: Q:2 – Frq:970Hz

LPF: 800Hz – BTW 24dB/Oct

Active dsp settings – High frequency part

3 to 6 cabinets per side (if more have to be mounted, eq must be checked in the far field)



In: -8dB – no delay - HPF: 1000Hz – BTW 18dB/Oct

Peaking #1: -6dB – Q:2 – Frq:390Hz

Peaking #2: +4dB – Q:3 – Frq:950Hz

Peaking #3: +4dB – Q:3.5 – Frq:1480Hz

Peaking #4: -3.5dB – Q:1.5 – Frq:1.9KHz

Peaking #5: +4dB – Q:7 – Frq:2.4KHz

Peaking #6: -4dB – Q:4 – Frq:3.1KHz

Peaking #7: +5dB – Q:5 – Frq:4KHz

Peaking #8: +4dB – Q:9 – Frq:4.7KHz

Peaking #9: +6dB – Q:9 – Frq:7.5KHz

Peaking #10: +4dB – Q:7 – Frq:9.5KHz

HShelving#1: +4dB – Q:1.25 – Frq: 4KHz

HShelving#2: +7dB – Q:1 – Frq: 900Hz

Limiters:

35Volts RMS. Attack 0.25 seconds. Release 0.5 seconds

100Volts PEAK. Attack 1ms. Release 15ms

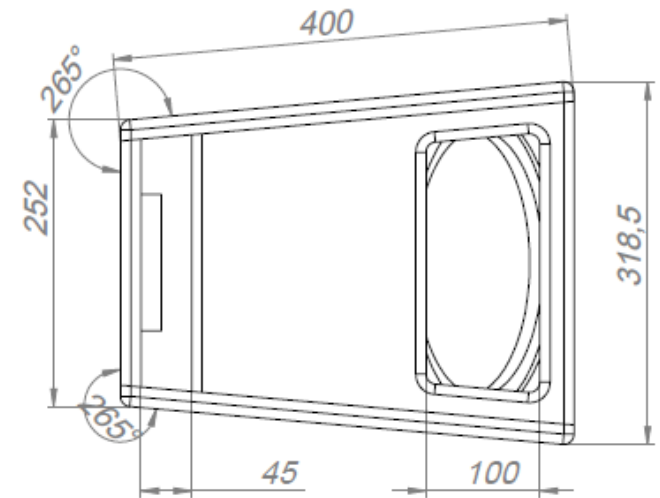
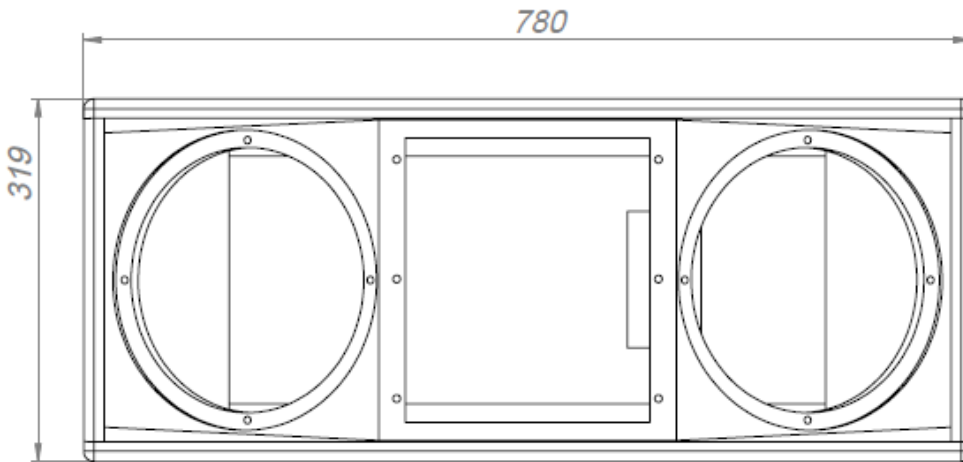
NOTES:

If using a single cabinet Hshelving#2 should be removed.

If using more than 6 cabinets per cluster, Hshelving filters should be increased checking far field response.

ENCLOSURE DESIGN

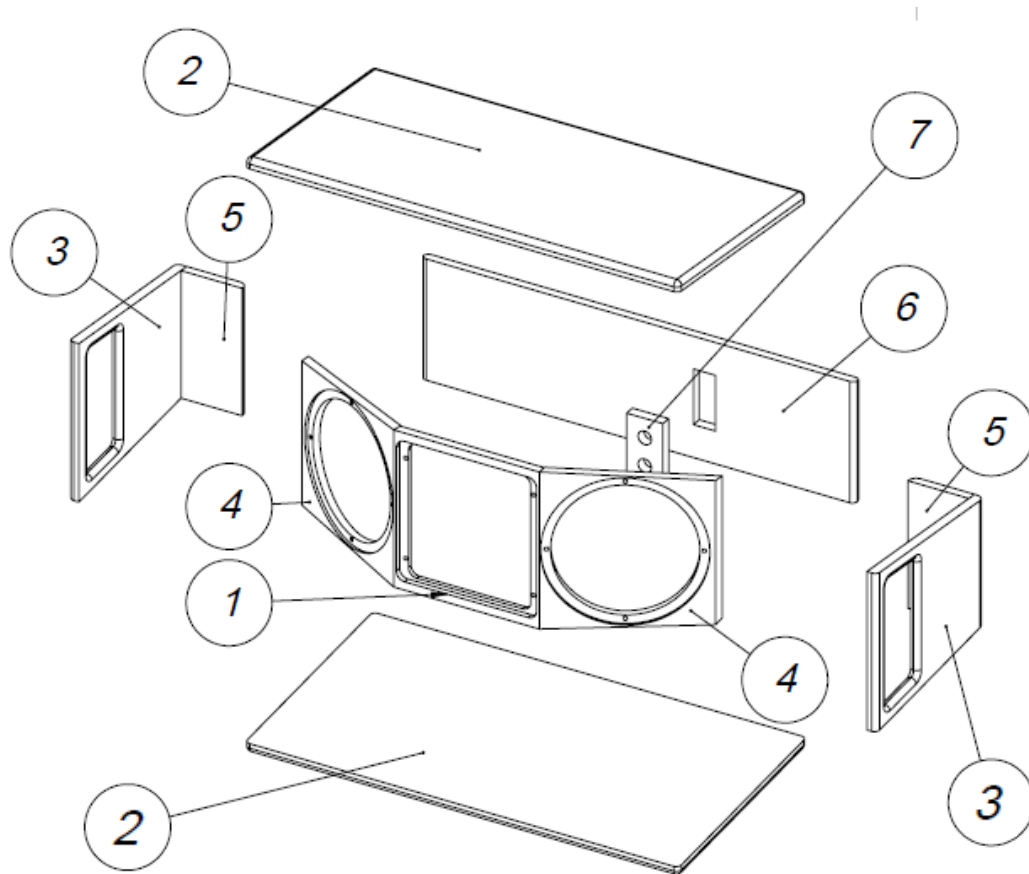
Overall dimensions



Upper view

ENCLOSURE DESIGN

Exploded view and parts

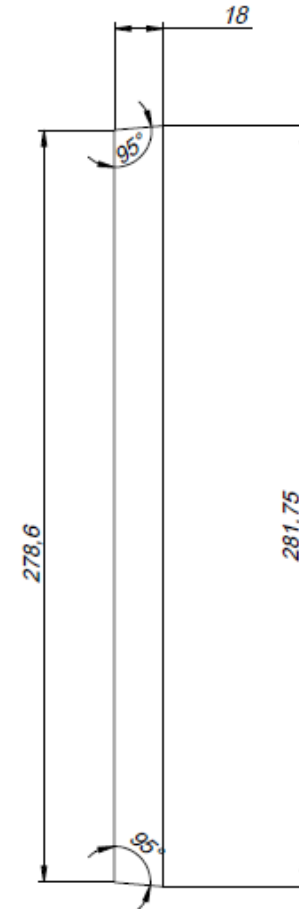
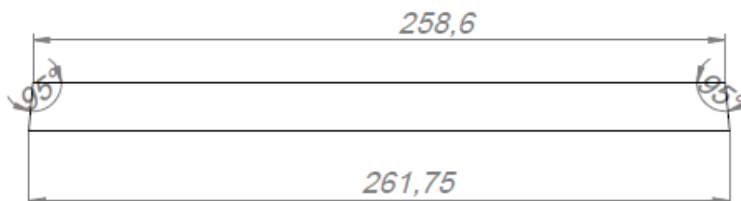
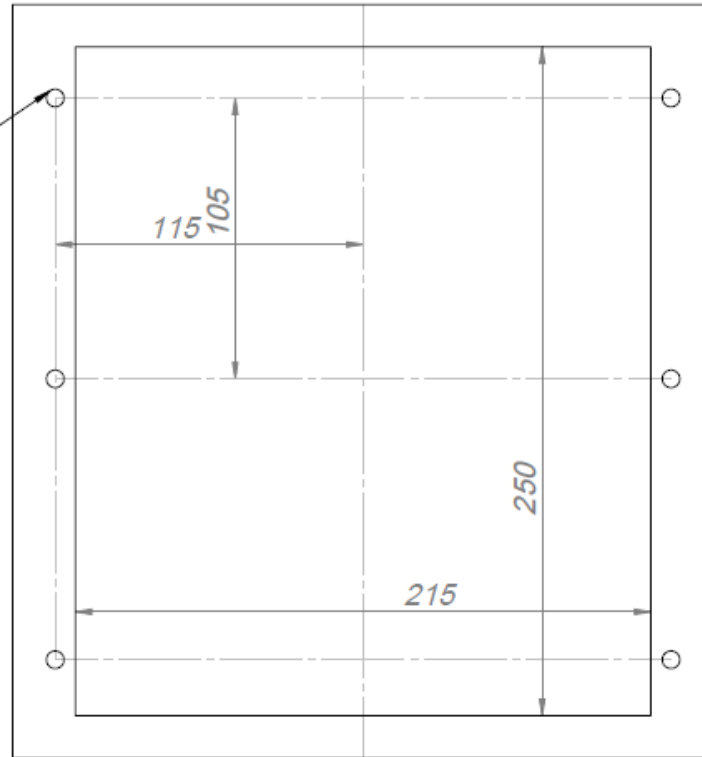


01	HORN BAFFLE	1 PIECE
02	TOP/BOTTOM	2 PIECES
03	SIDES	2 PIECES
04	WOOFER BAFFLES	2 PIECES
05	PORTS PANELS	2 PIECES
06	BACK	1 PIECE
07	CONNECTORS PANEL	1 PIECE

ENCLOSURE DESIGN

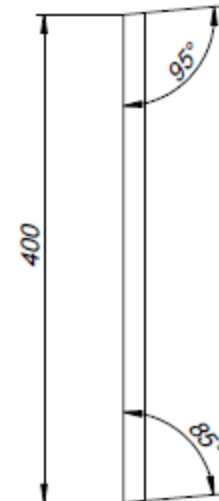
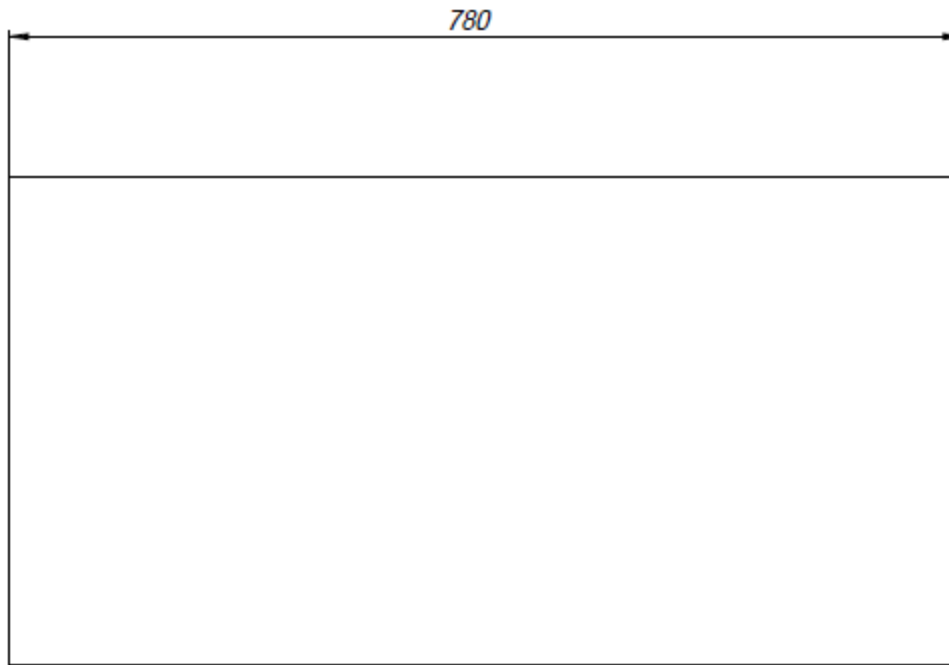
Part 1: Horn baffle

M6 holes



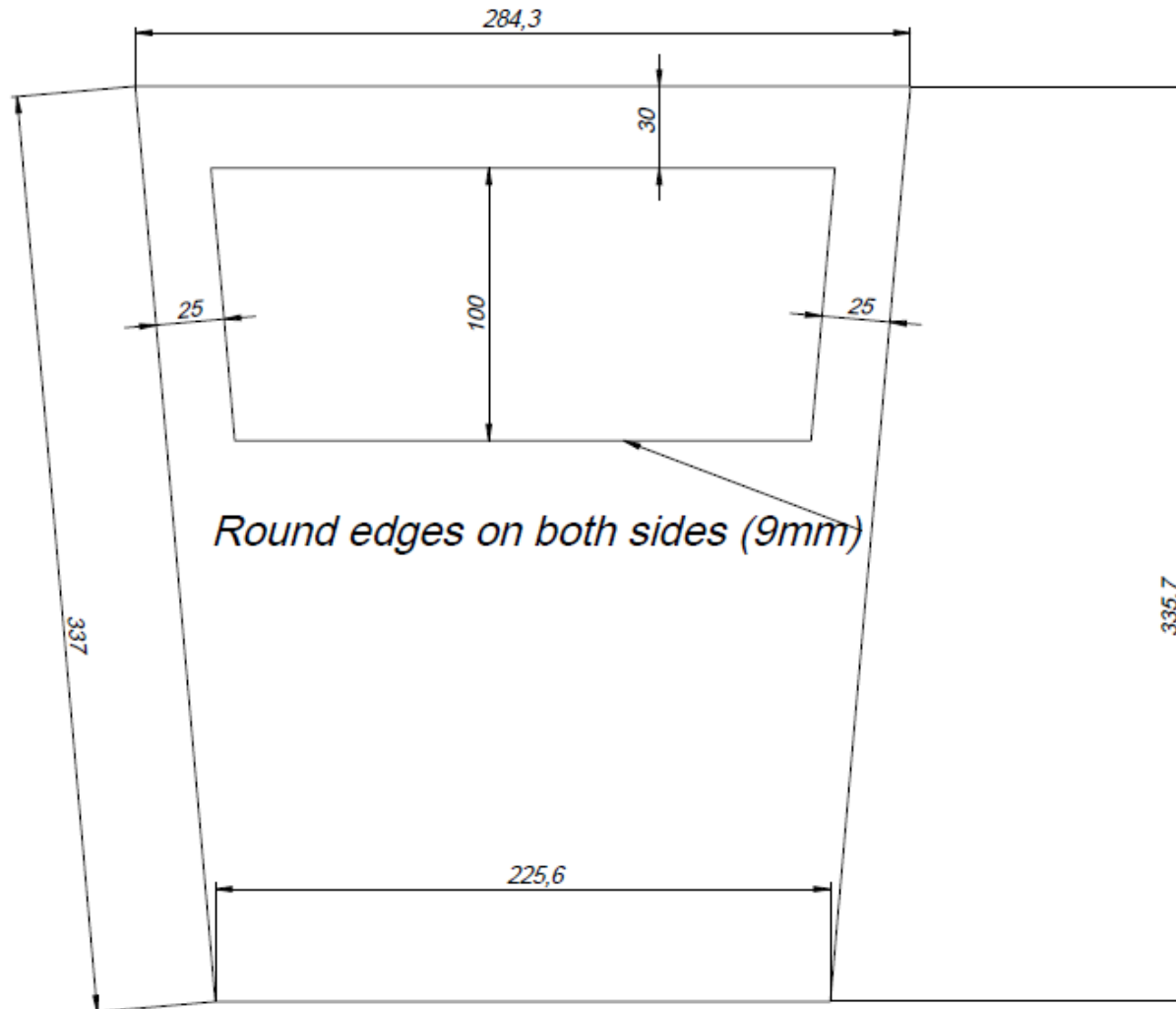
ENCLOSURE DESIGN

Part 2: Top/bottom (2pcs)



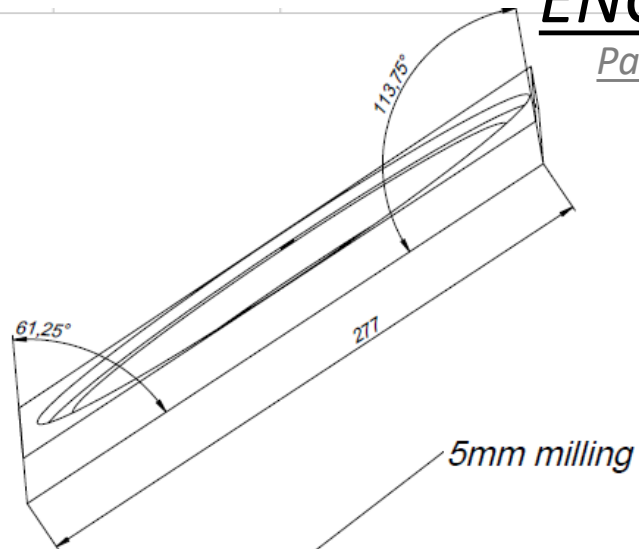
ENCLOSURE DESIGN

Part 3: Sides (2pcs)

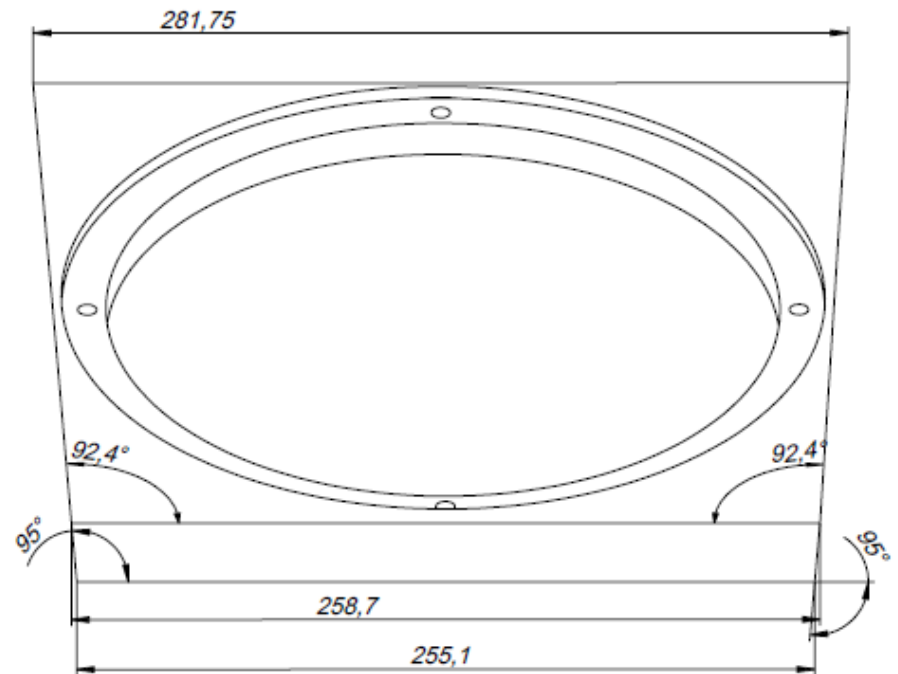
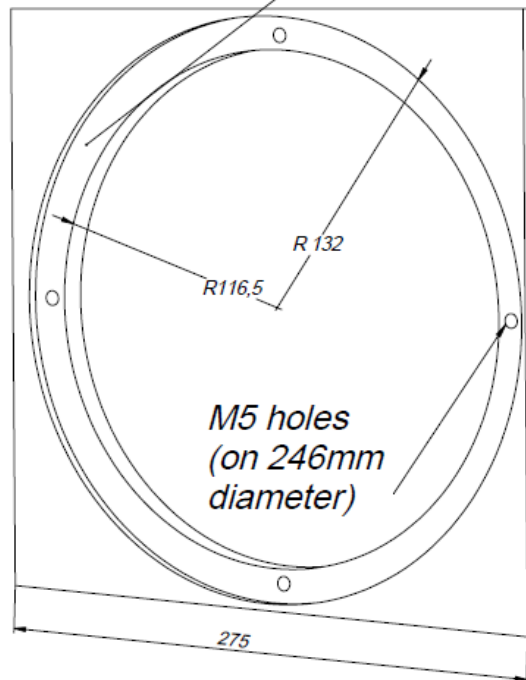


ENCLOSURE DESIGN

Part 4: Woofer baffles (2pcs)



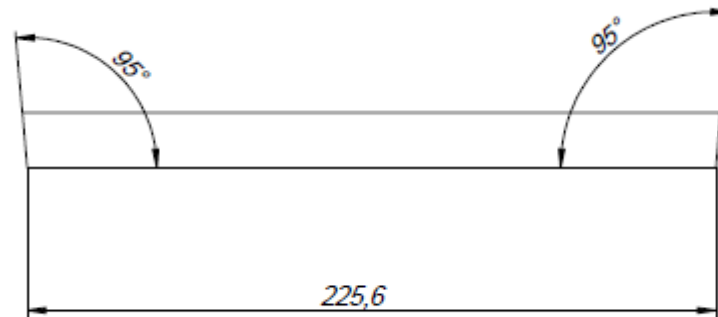
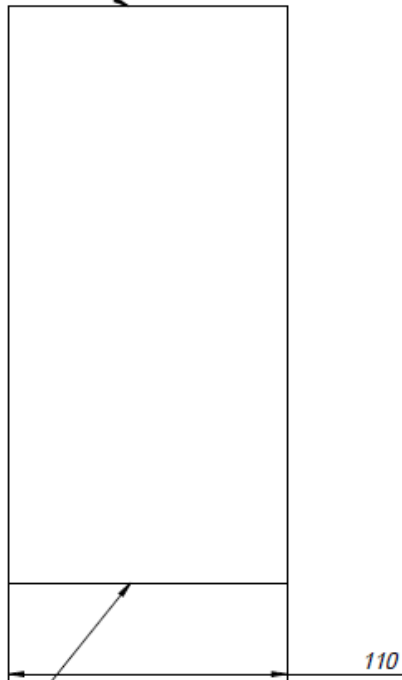
5mm milling



ENCLOSURE DESIGN

Part 5: Ports (2pcs)

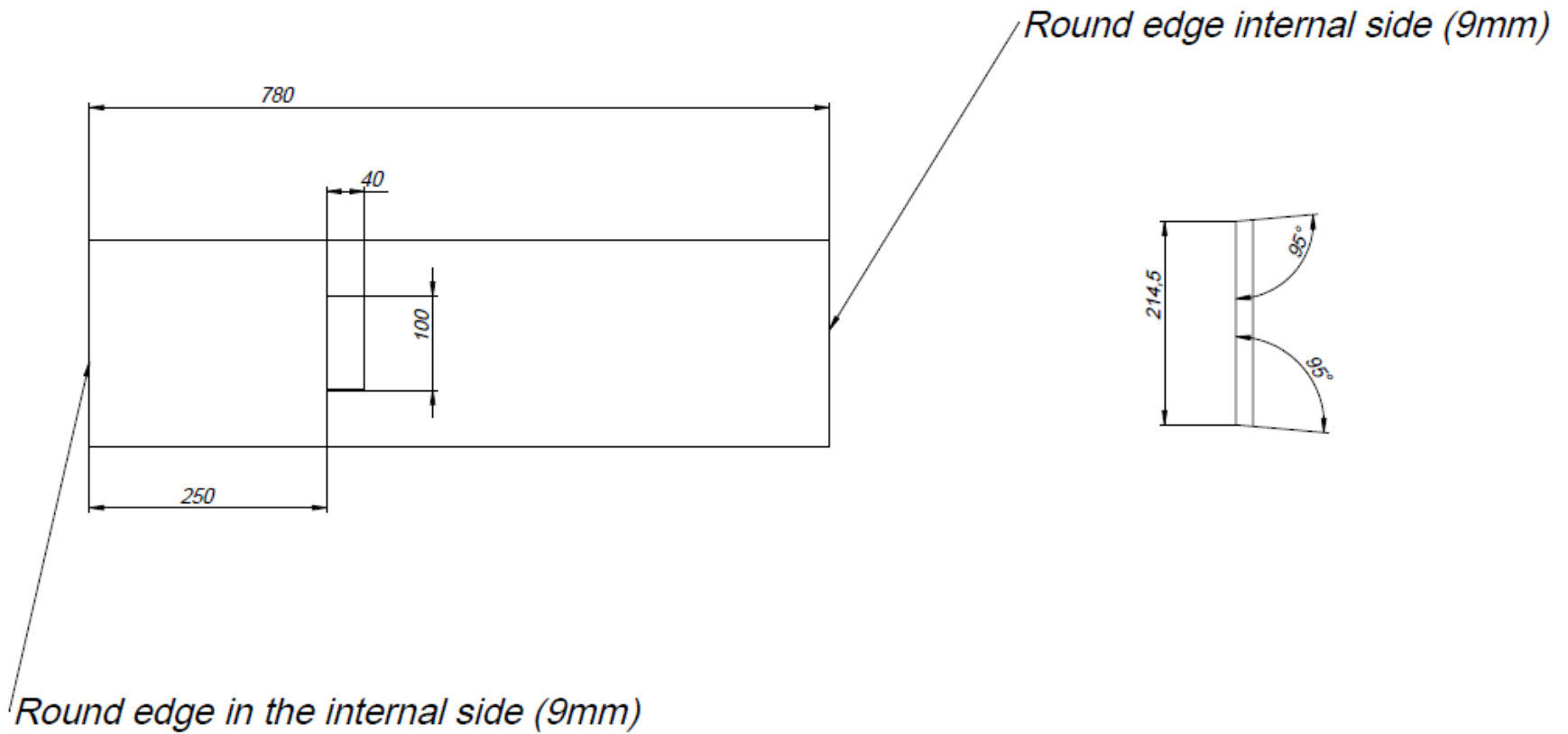
Round edge on one side (9mm)



Round edge on one side (9mm)

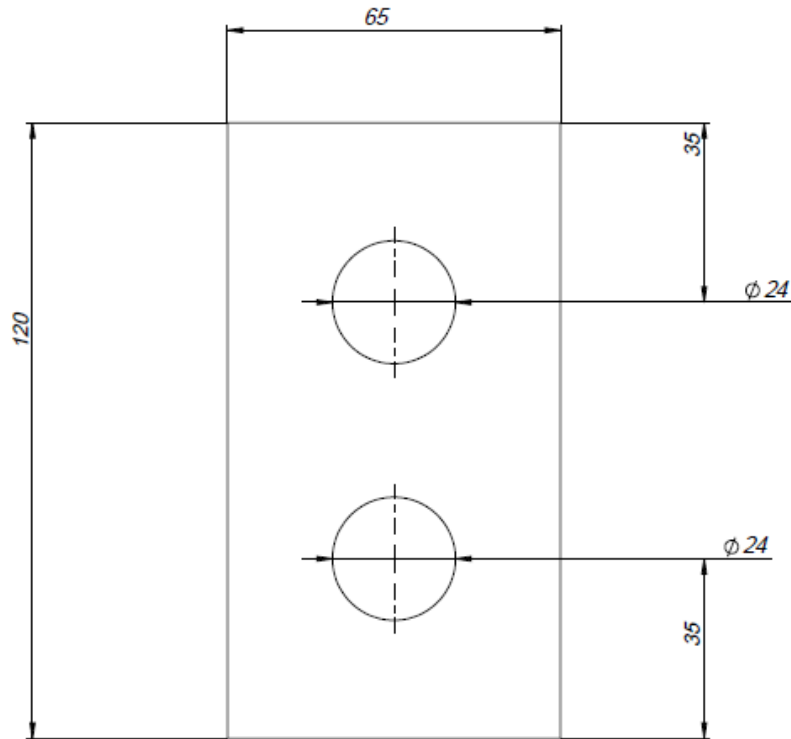
ENCLOSURE DESIGN

Part 6: Back



ENCLOSURE DESIGN

Part 7: Speakon panel



Notes about connections:

- We suggest to use good quality 4 pins connectors
- Woofers are connected in series to Pin1+/Pin1- (overall LF impedance -> 16ohms)
- Pin2+/2- are connected to the FB354-16 input connectors
- FB354-16 outputs are connected to the DCX354 coaxial driver.