

# OWNER MANUAL

**E MAX 3110**  
**E MAX 3112**

FULL RANGE HIGH POWER  
NEARFIELD SPEAKER





**IMPORTANT NOTES**

Before connecting and using this product, please read this instruction manual carefully and keep it on hand for future reference. This manual is to be considered an integral part of this product and must accompany it when it changes ownership as a reference for correct installation and use as well as for the safety precautions. RCF S.p.A. will not assume any responsibility for the incorrect installation and / or use of this product.

**WARNING:** To prevent the risk of fire or electric shock, never expose this loudspeaker to rain or humidity and also dust.

**SAFETY AND OPERATING PRECAUTIONS**

**1.** All the precautions, in particular the safety ones, must be read with special attention, as they provide important information.

**2.** Loudspeaker lines (amplifier outputs) can have a sufficiently high voltage to involve a risk of electrocution: never install or connect this loudspeaker when amplifiers are switched on.

**3.** Make sure all connections have been made correctly and the loudspeaker input impedance is suitable for the amplifier output.

**4.** Protect loudspeaker lines from damage; make sure they are positioned in a way that they cannot be stepped on or crushed by objects.

**5.** Make sure that no objects or liquids can get into this product, as this may cause a short circuit.

**6.** Never attempt to carry out any operations, modifications or repairs that are not expressly described in this manual.

Contact your authorized service centre or qualified personnel should any of the following occur:

- **The loudspeaker does not function (or works in an anomalous way).**
- **The cable has been damaged.**
- **Objects or liquids are inside the loudspeaker.**
- **The loudspeaker has been damaged due to heavy impacts or fire.**

**7.** Should the loudspeaker emit any strange odours or smoke, remove it from the line after having immediately switched the amplifier off.

**8.** Do not connect this product to any equipment or accessories not foreseen.

For suspended installation, only use the dedicated anchoring points and do not try to hang this loudspeaker by using elements that are unsuitable or not specific for this purpose.

Also check the suitability of the support surface to which the product is anchored (wall, ceiling, structure, etc.), and the components used for attachment (screw anchors, screws, brackets not supplied by RCF etc.), which must guarantee the security of the system / installation over time, also considering, for example, the mechanical vibrations normally generated by transducers.

**9. RCF S.p.A.** strongly recommends this product is only installed by professional qualified installers (or specialised firms) who can ensure a correct installation and certify it according to the regulations in force.

The entire audio system must comply with the current standards and regulations regarding electrical systems.

**IMPORTANT****WARNING**

**10.** Mechanical and electrical factors need to be considered when installing a professional audio system (in addition to those which are strictly acoustic, such as sound pressure, angles of coverage, frequency response, etc.).

**11. Hearing loss**

Exposure to high sound levels can cause permanent hearing loss. The acoustic pressure level that leads to hearing loss is different from person to person and depends on the duration of exposure.

To prevent potentially dangerous exposure to high levels of acoustic pressure, anyone who is exposed to these levels should use adequate protection devices.

When a transducer capable of producing high sound levels is being used, it is necessary to wear ear plugs or protective earphones.

See the technical specifications in the instruction manual for the maximum sound pressure the loudspeaker is capable of producing.

**12.** To ensure a correct sound reproduction, loudspeaker phase is to be respected (loudspeakers are connected respecting the amplifier polarity). This is important when loudspeakers are installed adjacent one another, for instance, in the same room.

**13.** To prevent inductive effects from causing hum, noise and a bad system working, loudspeaker lines should not be laid together with other electric cables (mains), microphone or line level signal cables connected to amplifier inputs.

**14.** The loudspeaker cable shall have wires (twisted, if possible, to reduce inductive effects due to surrounding electro-magnetic fields) with a suitable section and a sufficient electrical insulation. Refer to local regulations since there may be additional requirements about cable characteristics.

**15.** Do NOT connect the loudspeaker low impedance (8  $\Omega$ ) input to 100 V constant voltage lines.

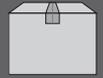
**16.** Install this loudspeaker far from any heat source.

**17.** Do not overload the loudspeaker with too much power.

**18.** Do not use solvents, alcohol, benzene or other volatile substances for cleaning the external parts of this product. Use a dry cloth.

RCF S.P.A. THANKS YOU FOR PURCHASING THIS PRODUCT, WHICH HAS BEEN DESIGNED TO GUARANTEE RELIABILITY AND HIGH PERFORMANCE.

## DESCRIPTION



### **E MAX 3112 and E MAX 3110 FULL RANGE HIGH POWER NEARFIELD SPEAKERS**

The E MAX 3112 AND E MAX 3110 are passive two-way speakers featuring high power woofers (12" woofer on E MAX 3112 and 10" woofer on E MAX 3110) and a 1" compression driver. They have been specifically voiced as a club systems for entertainment. The full-range bass reflex is conceived for installation in entertainment and small venues where near field quality and sound pressure is required. That includes karaoke rooms, conference halls, AV installations, public areas and clubs.

The high power woofers are designed to provide an excellent frequency response linearity with very low distortion. Strong magnetic structures guarantee dynamic and precision. The rear bass reflex allows a broader extension of low frequencies when the speakers are close to a wall.

Small isolating rubber elements placed between the cabinet's edges and the grille avoid unwanted vibration.

#### **E Max FLYING POINTS**

Nineteen M10 flying points – 4 on each side and 3 on bottom

#### **E Max FRONT GRILLE**

A strong powder-coated metal grille protects the front, and a special foam placed on the inside of the grille ensures protection from dust and humidity.

#### **E Max HI FREQUENCY TRANSDUCERS**

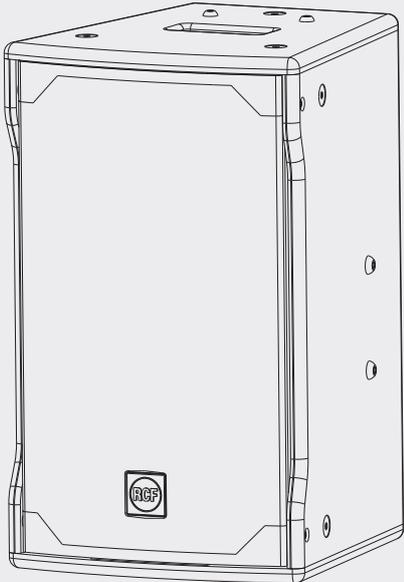
The high frequency transducer is an extremely compact 1" compression driver with 1.5" voice coil for professional applications. Flexible and easy to crossover, it offers high efficiency combined with a very high frequency extension.



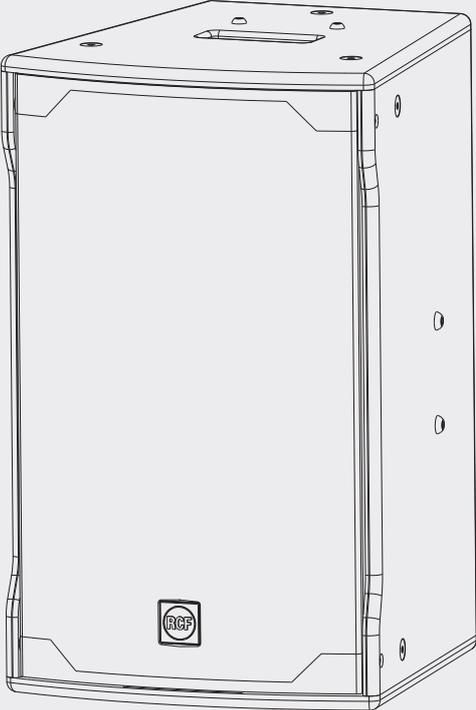
**MOUNTING POINTS**

For both E MAX, mounting points are 19 total:

- 4 on top
- 4 on bottom
- 8 on the sides (4 on each side)
- 3 on back side



**E MAX 3110**



**E MAX 3112**

**WARNING:** loudspeaker connections should be only made by qualified and experienced personnel having the technical know-how or sufficient specific instructions (to ensure that connections are made correctly) in order to prevent any electrical danger.

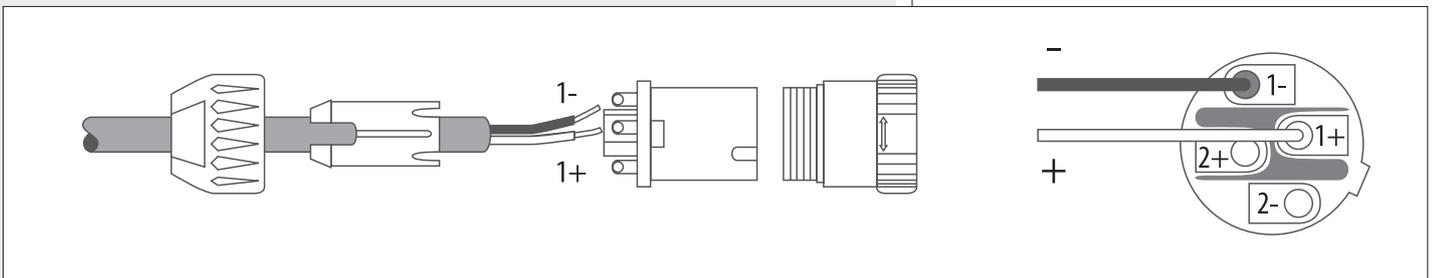
To prevent any risk of electric shock, do not connect loudspeakers when the amplifier is switched on.

Before turning the system on, check all connections and make sure there are no accidental short circuits.

The entire sound system shall be designed and installed in compliance with the current local laws and regulations regarding electrical systems.

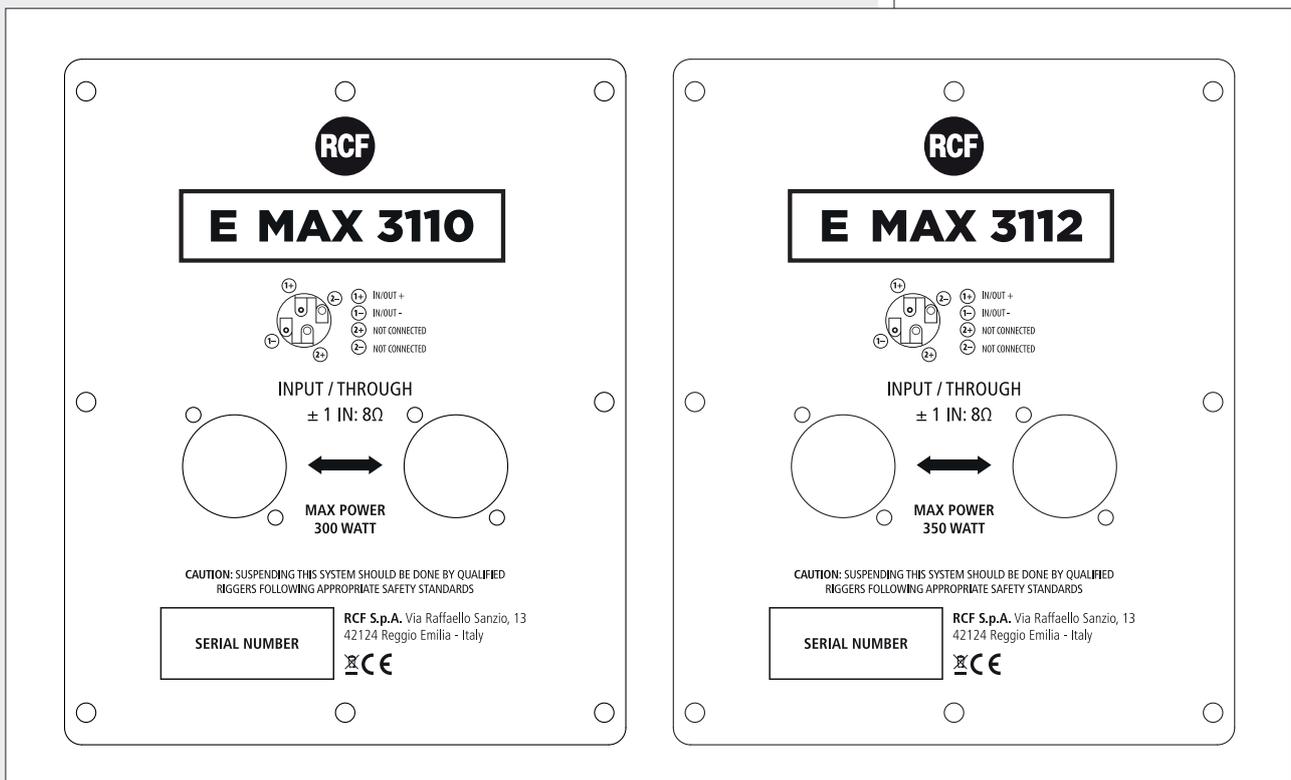
E MAX speakers are designed for indoor use only. If installed outdoor, they shall be protected against water.

The impedance value of each loudspeaker is 8 Ω.



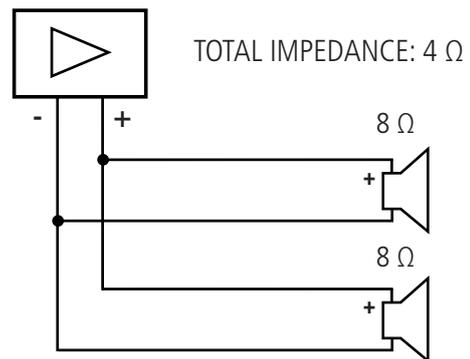
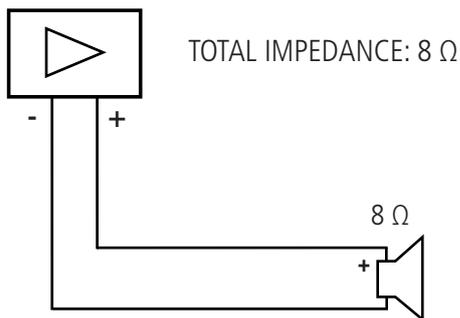
Connect the positive wire (amplifier '+' output) to the pin 1+ of the SPEAKON connector. Connect the negative wire (amplifier '-' output) to the pin 1- of the SPEAKON connector. The pins 2+ and 2- are not used.

Two sockets (input and output, linked in parallel) for 'Neutrik Speakon NL4' (4-pole) plugs are available on every rear panel.



## NOTES ABOUT LOW IMPEDANCE CONNECTIONS

- The total loudspeaker impedance must not be lower than the amplifier output impedance. Note: a loudspeaker total impedance equal to the amplifier output one permits to get the maximum deliverable power (but an higher loudspeaker impedance entails less power).
- The total loudspeaker power shall be adequate for the maximum deliverable power of the amplifier.
- The loudspeaker line shall be short (for long distances, it may be necessary to use cables with large cross-section wires).

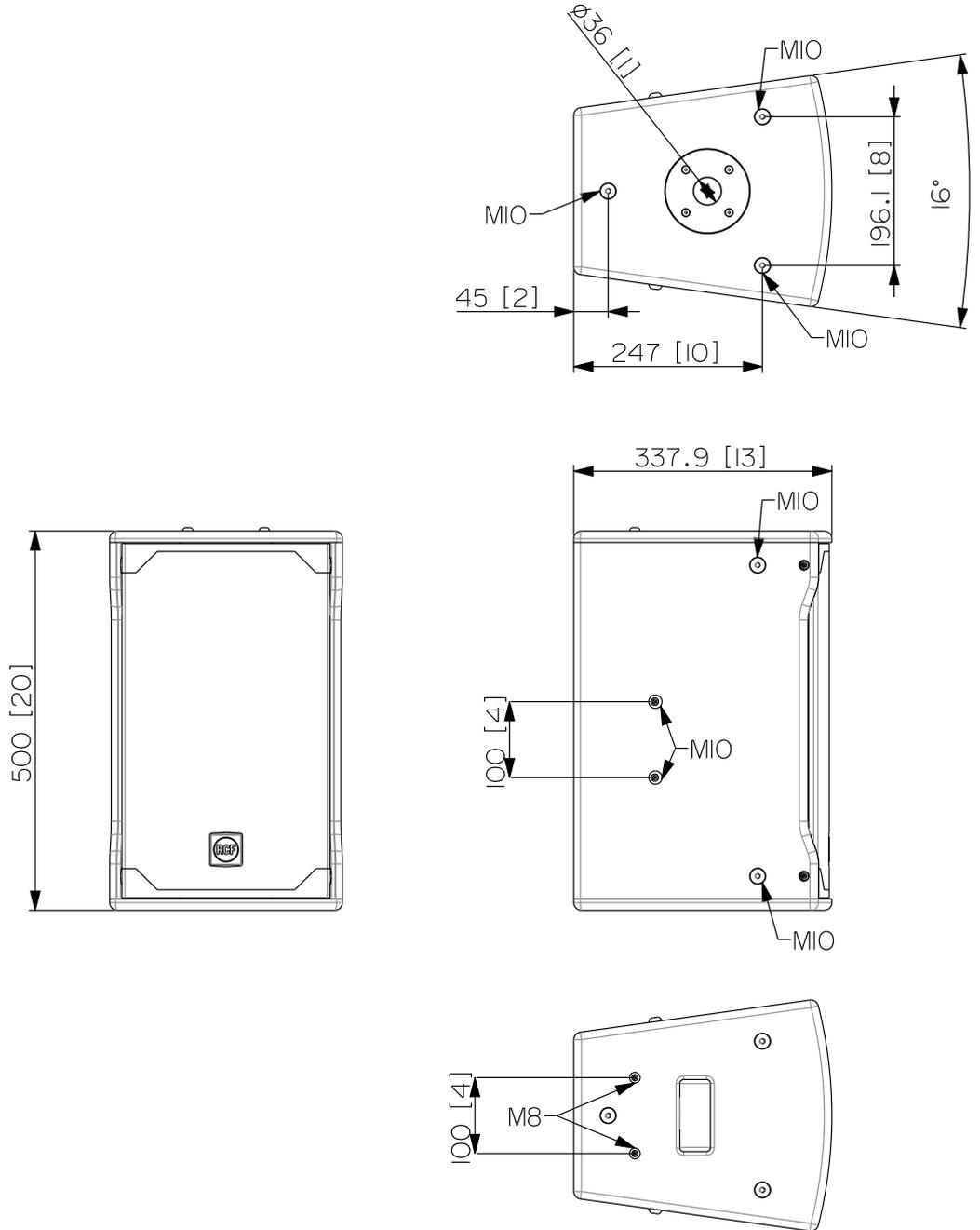


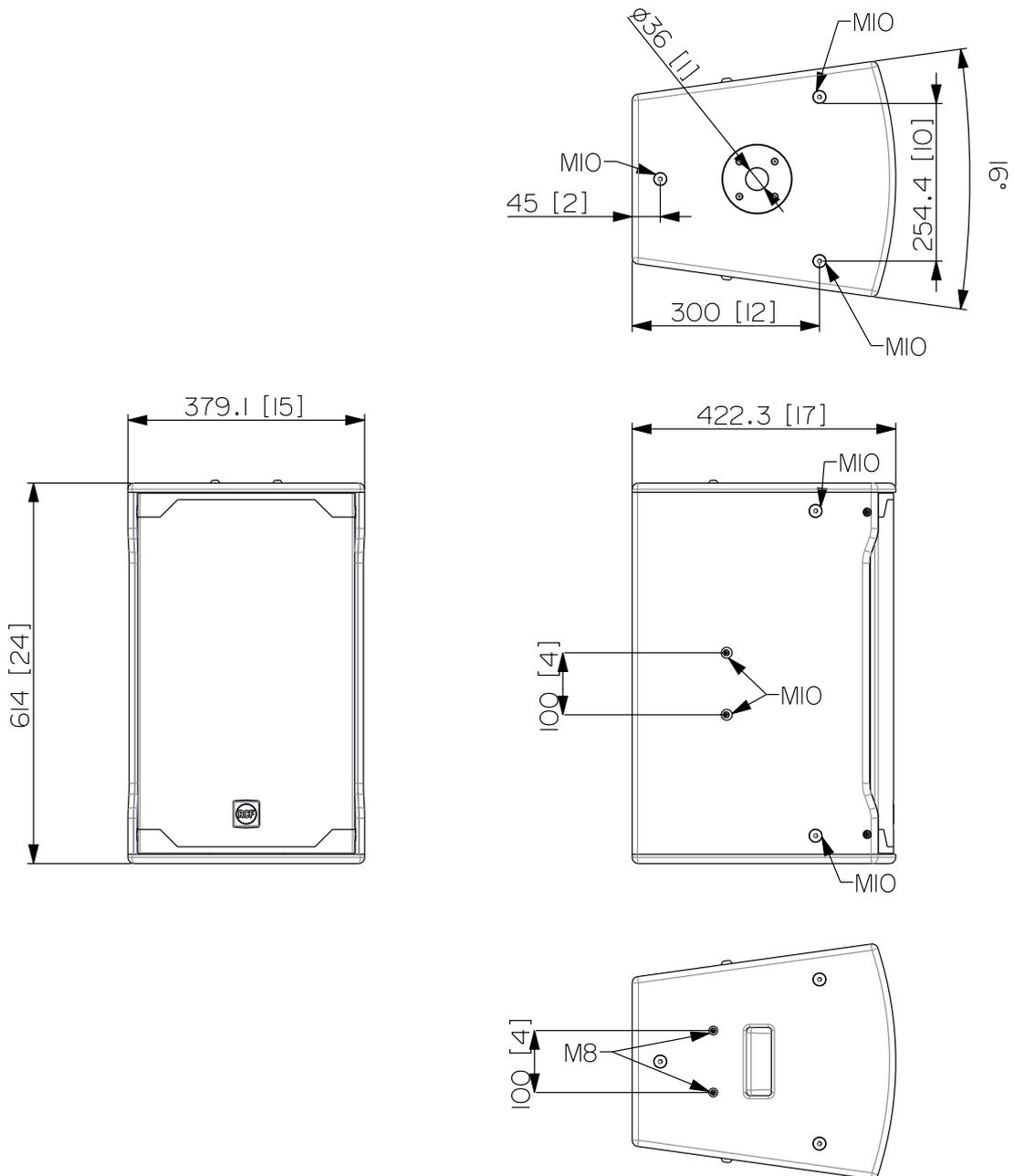
- Always use cables having wires with an adequate cross-section, considering the cable length and the total loudspeaker power.
- Loudspeaker lines must be kept separated from the mains cables, microphone cables or others, in order to avoid inductive phenomena may cause hum or noises.
- Use loudspeaker cables with twisted wires to reduce hum caused by inductive effects due to coupling with electromagnetic fields.
- Do NOT connect the low impedance input directly to 70 / 100 V constant voltage lines.



	<b>E MAX 3110</b>	<b>E MAX 3112</b>
<b>Frequency Response</b>	60 - 20000 Hz	55 - 20000 Hz
<b>Horizontal Coverage</b>	90°	90°
<b>Vertical Coverage</b>	70°	70°
<b>Directivity Factor Q</b>	11	11
<b>Max Spl</b>	128 dB	129 dB
<b>Nominal Impedance</b>	8 ohm	8 ohm
<b>Power Handling</b>	300 W	350 W
<b>Peak Power Handling</b>	1200 W	1400 W
<b>Reccomended Amplifier</b>	600 W	700 W
<b>Crossover Frequency</b>	1800 Hz	1800 Hz
<b>Compression Driver</b>	1.0" neo, 1.5 v.c. 100 W Peak 106 dB, 1W @ 1m	1.0" neo, 1.5 v.c. 100 W Peak 106 dB, 1W @ 1m
<b>Woofers</b>	10", 2.5" v.c. 600 W Peak 98 dB, 1W @ 1m	12", 2.5" v.c. 600 W Peak 98 dB, 1W @ 1m
<b>Input Connectors</b>	Speakon® NL4	Speakon® NL4
<b>Output Connectors</b>	Speakon® NL4	Speakon® NL4
<b>Protections</b>	Active Mosfet	Active Mosfet
<b>Cabinet Material</b>	Plywood	Plywood
<b>Hardware</b>	17 x M10 - 2 x M8	17 x M10 - 2 x M8
<b>Handles</b>	1 top	1 top
<b>Colour</b>	Black	Black
<b>Height</b>	500 / 19,7 mm/inch	614 / 24,17 mm/inch
<b>Width</b>	305 / 12 mm/inch	381 / 15 mm/inch
<b>Depth</b>	338 / 13,31 mm/inch	422 / 16,61 mm/inch
<b>Net Weight</b>	17,5 kg	22 kg

# E MAX 3110 DIMENSIONS





[www.rcf.it](http://www.rcf.it)



**RCF SpA:** Via Raffaello, 13 - 42124 Reggio Emilia - Italy  
tel. +39 0522 274411 - fax +39 0522 274484 - e-mail: [rcfservice@rcf.it](mailto:rcfservice@rcf.it)

10307629 RevB