

Eton RSC 165: High-tech with practical suitability

Pure Precision

► At Eton the development department never tires of bringing us more new high-end speakers for our cars. The latest addition to this story is the RSC 165, which we want to present in more detail here.

It was not so long ago that Eton presented the Graphit series and, most recently, the reincarnation of the legendary Hexacone. When you look at how much (or rather how little) other firms turn out high-end speakers, you have to take your hat off to the good old Neu-Ulm-based company. And with the brand new RSC 165 they have not built a slimmed-down or beefed-up clone of an existing technology. Instead, as often is the case at Eton, this system has definitely been created from a blank sheet of paper — at any rate that's how it appears. For our RSC has absolutely nothing in common with an existing Eton speaker system. At present there is an RSC as a component system with woofer, tweeter and a cable crossover for the tweeter. Pricewise, it is positioned between the Graphit high-end system and the already very good PRO+. However, the technology used in the RSC certainly justifies the positioning of the new RSC. As already mentioned, nei-

ther the 16 cm speaker nor the tweeter share commonalities with their neighbors in the product range. And apparently the Eton developers had complete freedom, because they went all out. At first sight the RSC woofer looks unspectacular, but it is packed full with high-tech features. Clearly we have an extremely solid die-cast basket, which again is not derived from the Graphit or the PRO+, but made specially for the RSC. The basket is also built relatively flat, because Eton emphasizes that a certain installation friendliness was also on the to-do list. We have a conventional ferrite drive, which naturally works superbly, a large 32 mm voice coil, which sets the RSC apart from the standard size of 25 mm. As is always the case from Eton, the finish is beautiful, and in the higher-end systems the magnet systems also

proudly bear the „Made in Germany“ label. The highlight of the RSC 16 is its cone, which comes as a sandwich of three materials. The core consists of hard foam, while the front side is made of aramid fiber (perhaps better known under the brand names Rohacell and Kevlar). And good old paper is also in play, namely as the backing on the rear of the cone. Eton has continued to use the now typical ribbed design also on the RSC, which gives the construction additional stability. In the center of the cone sits an aluminum dust cap, which seems to be directly connected to the coil former: a trick that is often

The basket has generous ventilation openings. Both chassis are manufactured in Germany



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The included tweeter crossover cable qualifies the RSC as a component system – we would rather call it an active speaker

The new die-cast basket of the RSC is kept flat to achieve a reasonably low installation depth

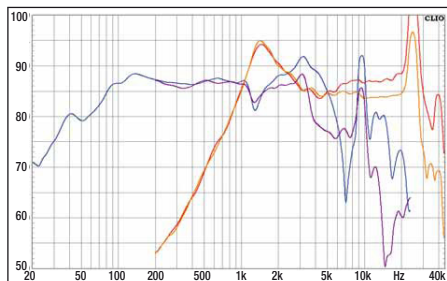


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used on full-range and mid-range drivers to give the chassis an extra portion of treble. Our RSC woofer does not really need this, as the dome tweeter RSC 2, also a completely new development, is responsible for the treble. We have a ceramic dome in front of us. In this case that means an aluminum cone has been anodized and thus coated with ceramic aluminum oxide. This creates a two-layer cone made of hard ceramic and the relatively soft metallic aluminum. Similar to the woofer, here Eton relies on hardness, though not without a dose of damping. Although you cannot tell from the driver, the dome has a small resonant chamber and air gap ventilation. Once again we find installation friendly dimensions, so that the RSC 25 has no problem fitting into any mirror triangle.

Measurements and Sound

The small resonant chamber at the rear of the tweeter has an effect. Anyway we detected a relatively low resonant frequency at 1.4 kHz, so the RSC 25 can be separated a few Hertz lower than a 25 mm standard dome if necessary. The resonance can also be clearly seen in the amplitude frequency response, after which it goes cheerfully up to over 20 kHz, where the cone resonance of the ceramic dome can be clearly seen. At 24.5 kHz the peak is nicely high up, well outside the audible range. The hard cone can also be seen in the measurements for the woofer. The 16 cm speaker runs straight as a die, with only one small harmless dip at 1.3 kHz up to its operating limit at around 3 kHz. Above that there is almost no sound pressure, so that the RSC 16 could also be run without a

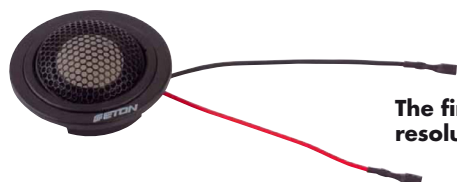


Both chassis perform convincingly in their operating ranges. However, both cones exhibit sharp resonances at 9.5 and 24.5 kHz respectively, which are outside their working ranges. The overlap is quite narrow so there is little freedom when selecting the crossover frequency.

crossover. Both chassis exhibit very low distortion in front of the microphone, so there is nothing but praise here. Sound-wise, things go along almost as expected. Even blindfolded you could think that hard cones are operating here. The RSC plays with almost exuberant precision, and that is across the entire frequency range. The bass reproduction leaves nothing to be desired, being deep enough and again extremely precise. The ceramic tweeter plays exactly right, namely with relentless fidelity and with a meticulousness reminiscent of the legendary CX, a really wonderfully made high-tech speaker system CX 290 from the MGS 180 system. Like that one, the current RSC also impresses with a striking spatial reproduction that is spectacular. The RSC is a speaker system that is not inconspicuous but one that you will fall in love with from the first note if you like this merciless form of music reproduction. For audiophiles who prefer it when the sound is soft and pleasant, Eton has better candidates than the RSC.

Summary

With the RSC 165 Eton presents a high-tech speaker system that scores for its fascinating technology, first class build quality and ultra-precise reproduction.



The fine ceramic dome turns out to be a resolution marvel

Eton RSC 165

Price about 500 Euro
Distributor ACR, CH-5330 Zurzach
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Summary

▶ Sound quality	55 %	1,0	■■■■■
Bass	11 %	1,0	■■■■■
Neutrality	11 %	1,5	■■■■■
Transparency	11 %	1,0	■■■■■
Soundstaging	11 %	0,5	■■■■■
Dynamics	11 %	1,0	■■■■■
▶ Lab	30 %	1,2	■■■■■
Frequency response	10 %	1,5	■■■■■
Efficiency	10 %	1,0	■■■■■
Max. SPL	10 %	1,0	■■■■■
▶ Workmanship	15 %	1,0	■■■■■

Technical Data

Basket diameter	165 mm
Mounting diameter	144 mm
Mounting depth	59 mm
Magnet diameter	95 mm
Tweeter dome diameter	25 mm
Tweeter housing diameter	44 mm
Max. cut off frequency W	3,5 kHz
Min. cut off frequency T	2,5 kHz
Cut off frequency while testing	2,8 kHz
EQ while testing	–
Grills	–
other	Capacitor for Tweeter
Nominal impedance	4 ohms
DC resistance Rdc	3,43 ohms
Coil inductivity Le	0,33 mH
Coil diameter	32 mm
Cone surface Sd	139 cm²
Resonance frequency Fs	50 Hz
Mechanical quality Qms	5,43
Electrical quality Qes	0,51
Total quality Qts	0,46
Equivalent volume Vas	16,3 l
Moving mass Mms	16,8 g
Rms	0,97 kg/s
Cms	0,60 mm/N
B*1	5,98 Tm
Pressure 2 V, 1 m	87 dB
Power handling	30 – 200 W

Eton RSC 165

Top-Class **1,1**

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Price/performance: very good

"An acoustic magnifier for listeners who want to know exactly what they are hearing."