800 Series
DIAMOND
A legend reborn Everything moves on. Even when you’ve reached the pinnacle of technological achievement, there are always new goals to aim for, new standards to set. In 1979, we redefined what’s possible in sound reproduction with the very first 800 Series speaker – the Matrix 800. In 1998, we re-wrote the rulebook all over again with the Nautilus™ 800 Series. But we didn’t stop there. We continued to refine and experiment, and now we’ve raised the benchmark yet again. The 800 Series Diamond harnesses the unique properties of diamond throughout the range, producing a sound of unheard-of accuracy and realism. At Bowers & Wilkins, the quest for perfection never ends.
The miracle material  It can cut stone and grind glass. It's a superb thermal conductor. And it's the magic ingredient in every model in the new 800 Series Diamond range. Our acoustic research expert Dr Gary Geaves explains why diamond is the ultimate tweeter material.

Tell us about tweeter design – what are you trying to achieve, and what are the main challenges to overcome?

Our aim here at Bowers & Wilkins has always been to design transducers that accurately reproduce the signal. It’s really quite easy to create a sound but it’s much more difficult to reproduce a signal accurately. When it comes to tweeters, this aim translates into creating a device that moves as a rigid piston over the audible frequency range – in other words, the range below 20 kHz.

As you go up in frequency, you reach a point where the tweeter stops behaving in a nice, controlled way and it starts to resonate. The frequency at which this occurs is usually called the break-up frequency. As you go beyond the break-up frequency, you encounter more and more resonance. The problem with resonance is that it impacts a character to the speaker, which is obviously not what you want when you’re aiming to accurately reproduce a signal.

So the main challenge in tweeter design is to overcome the problem of resonance. And you do this by trying to push the break-up frequency as far above the range of human hearing as it possibly can.

What have you been doing to get around this problem?

For a long time, Bowers & Wilkins have used aluminium dome tweeters. Aluminium’s a really good material to use, because it’s relatively light and stiff, and it results in a relatively high break-up frequency. Over the years we’ve been able to optimise the mechanical design. For example, for the second generation 800 Series, we managed to improve the break-up frequency from about 23 kHz to 30 kHz.

It was then that we noticed something odd. We found that, with each improvement in break-up frequency, the tweeter sounded much cleaner. Not that surprising, you might think – but we found this really curious because, as I’ve already said, human beings can only hear up to 20 kHz. Improving the break-up frequency from 23 to 30 kHz shouldn’t have made any difference to the audible sound quality. Yet it did. So we started to wonder why this was, and if there might be ways of raising the break-up frequency much higher.

How did you go about trying to raise the break-up frequency level? What sort of design approaches did you consider?

We started off by thinking about the size, shape and positioning of the tweeter. Now, the easiest way to improve the break-up frequency is to make the tweeter much smaller. The problem with that approach is that, to get the same output over the same bandwidth, you have to drive the speaker a lot harder. The dome has to move a lot more. And when that happens, you run into problems with linearity, distortion and power compression.

An alternative approach might be to use a supplementary tweeter in addition to your main tweeter. We did consider this, but we found it just complicated the situation. Instead of compensating for the deficiencies of a main tweeter, the supplementary tweeter just added potential for interference between the two tweeters. In the end, this approach just didn’t seem consistent with our principle of keeping things simple.

An alternative approach might be to examine in detail how the whole structure vibrates, and the acoustic field that results from the vibration. We were also able to look at the motor systems in loudspeakers. This allowed us to come up with new ways to optimise motor systems; you can do things that you can’t do in the real world. So we started to look at tweeter dome materials we could use instead of the aluminium – materials that share similar properties to the hypothetical perfect dome.

And we found that the ultimate material – the material that doesn’t exist in reality – but that’s another beauty of finite element analysis, you can do things that you can’t do in the real world. So we started to look at tweeter dome materials we could use instead of the aluminium – materials that share similar properties to the hypothetical perfect dome. And we found that the ultimate material – the absolute closest match in terms of its rigidity and dynamic stiffness – is diamond.

How did you hit on the idea of using diamond as a tweeter dome material?

We discovered the benefits of diamond thanks to a process called finite element analysis. It’s a tool that’s widely used in the aerospace and automotive industries to create virtual computer prototypes, as you can carry out experiments before committing to a real physical prototype.

By using finite element analysis we were able to look more closely than ever before at how a speaker reproduces sound. We could examine in detail how the whole structure vibrates, and the acoustic field that results from the vibration.

We were also able to look at the motor systems in loudspeakers. This allowed us to come up with new ways to optimise motor systems; you can do things that you can’t do in the real world. So we started to look at tweeter dome materials we could use instead of the aluminium – materials that share similar properties to the hypothetical perfect dome.

As I said, with aluminium, we were getting a maximum break-up frequency of about 30 kHz. Pretty amazing, when you consider the human hearing threshold is 20 kHz. But by using diamond, we were able to go far, far higher than that, creating a tweeter that breaks up at 70 kHz. However, diamond doesn’t just have a much higher break-up frequency – it also outperforms aluminium within the range of human hearing. When you compare the response of a diamond tweeter with the perfect hypothetical rigid tweeter, the results are very similar below 20 kHz. This means that you can hear a dramatic improvement in sound quality.

The resulting tweeter sounds more effortless, and yet more detailed, and has a much more realistic soundstage than the standard aluminium tweeter.

So what are the benefits of using diamond tweeter domes?

As I said, with aluminium, we were getting a maximum break-up frequency of about 30 kHz. Pretty amazing, when you consider the human hearing threshold is 20 kHz. But by using diamond, we were able to go far, far higher than that, creating a tweeter that breaks up at 70 kHz. However, diamond doesn’t just have a much higher break-up frequency – it also outperforms aluminium within the range of human hearing. When you compare the response of a diamond tweeter with the perfect hypothetical rigid tweeter, the results are very similar below 20 kHz. This means that you can hear a dramatic improvement in sound quality.

Dr Gary Geaves, Head of Research, Bowers & Wilkins

Diamonds all round  The 800 Series Diamond family encompasses speakers of all sizes and applications, from mighty studio monitors to bookshelf speakers that will fit snugly into domestic spaces of any size. But while every speaker is different, they have two key features in common – a tweeter made from pure diamond, and sound quality that will leave you speechless.
A diamond is born

Making diamond the natural way takes volcanic temperatures and pressures, and around two billion years. Hardly ideal if you want to produce it for manufacturing purposes, let alone form it into the precise shape required for a tweeter dome. Luckily, scientists have found a way around this. Chemical vapour deposition is a technique that allows diamond to be grown, like a crystal, under laboratory conditions.
Once the diamond has formed, it is precision-cut by laser to remove any surface irregularities and to make sure that the geometry of each tweeter dome exactly matches the next. The diamond domes are then cleaned in four stages in an ultra-sonic tank, before a protective platinum coating is applied to the surface.

Each diamond dome is rigorously tested and inspected for the tiniest signs of imperfection. Only when a dome has passed every test do we give it the final seal of approval – its own unique serial number. From this number we can trace the entire history of its manufacture, right back to the former on which it was grown.
Not all the sound generated by tweeter drive units is good sound. To soak up wayward sound energy and reduce resonances to a minimum, every tweeter in the 800 Series Diamond is mounted on top of the cabinet, and uses the tapering tube design from Bowers & Wilkins’ trailblazing Nautilus speaker. Added to this, our new quad-magnet design improves sensitivity, which reduces compression and brings music to life. So all the sound you hear is good sound.

A head for sound

The teardrop-shaped midrange head is a distinctive feature of both the top-of-the-range 800 Diamond and the 802 Diamond. Moulded from Marlan™, a synthetic mineral filled resin, this granite-hard enclosure is sprayed with seven coats of lacquer and polished by hand until it’s as smooth as glass.

Nautilus tubes

Quad magnets. For the 800 Series Diamond we have redefined the science of magnet motor design. In the tweeter, a unique quad magnet design (in red, above) focuses the magnetic energy right where the voice coil sits, and keeps the drive running cool and smooth.
Kevlar® is known as the wonder fabric in bulletproof vests. But, as Bowers & Wilkins discovered, no material is better suited to disrupt the standing waves that cause distortion and coloration in the midrange. To enhance the properties of Kevlar yet further, we’ve added something very special. The FST™ acts like a circular shock absorber around the cone, almost totally absorbing the sound-smudging bending waves that travel outwards to the cone’s perimeter. A midrange driver never sounded cleaner, or more responsive.
The 800 Series Diamond bass driver is a formidable piece of engineering, designed to preserve the speed and “slam” of the most demanding bass lines. The cone material is Rohacell®, a sophisticated composite of the kind normally used for aircraft and performance cars. The new dual magnet design reduces distortion for more natural and consistent bass character. For unshakable bass, it’s the bottom line.
Bass needs air to breathe. But if turbulence occurs as air moves in and out of a speaker's reflex port, you'll hear extraneous noise — and, as you turn the volume up, the bass won't be as tight or well-timed as it should be. The Flowport™ in the 800 Series Diamond minimises turbulence in the same way as a golf ball. Dimples on the surface generate tiny eddy currents, over which air can flow smoothly and, above all, silently.

The way a speaker's crossover is constructed speaks volumes about the quality of its mechanical components. What to look for is simplicity. The rule is, the better the design of the drive units, the simpler the design of the crossover can afford to be. And the quality of the 800 Series Diamond drive units is such that we've been able to make the speaker's first-order crossover one of the simplest — and best — we've ever produced.

Deep breath

Deceptively simple

Gold/Silver/Oil Mundorf capacitors in the high-frequency crossovers, for improved signal to tweeters and superior sound quality.
You won’t find many straight lines in nature – for good reason. Continuous, curving surfaces create stronger structures with the same amount of material. In the 800 Series Diamond, the curving cabinet forms a solid outer shell that shrugs off vibrations and resonance. Add an internal Matrix™ system that braces the structure like the ribs of a ship’s hull, and you have a speaker that’s more than capable of standing firm under pressure.
An ear for quality
Developing and assembling great drive units is one thing. But it’s up to the crossover to make sure those drivers are singing harmoniously together. According to top development engineers John Dibb and Tom O’Brien, designing the perfect crossover is a job that requires patience, fine judgement and many hours of listening.

Why is simplicity so important in crossover design?

John Dibb: John Bowers once said that we’re not trying to give the most in a loudspeaker, we’re trying to lose the least. That was many years ago, but it’s just as relevant today. The key to loudspeakers is not losing the fine detail in the sound.

Our aim is to create an illusion of reality by giving the listener accurate auditory clues — and to remove the distortion and colouration that can mask this information. We’ve been able to enhance our measurement techniques to the point where we know more than ever about the factors that cause distortion and colouration in drive units.

Nowadays, drive unit design has become so advanced that it has virtually eliminated these phenomena. In turn, this has allowed us to keep crossover design as pure and simple as possible.

However, when drive units are working so well, this highlights another potential challenge: the difference in the sound of the different components within the crossover. We need to make sure that the components we choose for a speaker’s crossover are the very best ones for the job.

What role does listening play in the design process?

Tom O’Brien: You can get two identical-looking components, specified exactly the same way on paper, but one will have a completely different sonic characteristic to the other. And the only way that it’s possible to pick out the ones that sound the best is by listening to them one at a time, over and over again. This listening process can take a long time. It can take weeks, sometimes months, to fully balance the system and fine-tune it until we’re happy with it. We have to try the systems out in many different rooms, and on different equipment, with a huge variety of music.

I think it’s a great testament to our attention to detail that recording studios such as Abbey Road, Deutsche Grammophon and Decca, among others, have used our speakers for a long time to monitor their music. It’s the ultimate test to hear the master tape of a recording that’s been done minutes ago, and check that it’s close to reality of the performance in the studio.
At our dedicated cabinet-making factory in the UK, state-of-the-art technology is fused with traditional craftsmanship. While a single 35mm thick sheet of ply is pressed into shape for the main cabinet body of the 800 Series Diamond, its final skin of real wood veneer is selected by hand from only the top 10% of veneers available. All of the wood we use is sourced from sustainable forests.
If you’re planning to use the 800 Series Diamond as part of a home theatre set-up, there’s every chance that you take your film viewing enjoyment very seriously indeed. In which case, you’re also going to need a seriously good subwoofer. One with the power needed to deliver the mightiest movie sound effects, but also one with the finesse and precision to match the incredible realism of the 800 Series Diamond. Not an easy balance to strike. But one that the DB1 subwoofer handles with ease.

Despite its relatively compact size, the DB1 delivers awesome bass power, thanks to a unique design incorporating two opposing 12 inch drivers, and its own built-in 1000W digital amplifier. Digital Signal Processing keeps the output dynamic and accurate, while equalization software fine-tunes the speaker to match the character of your listening room. Power. Responsiveness. Control. Put them together, and you’ve got a subwoofer that’s the ideal match for the 800 Series Diamond.

Take control! The DB1 allows you to make minute adjustments depending on your personal listening preferences, or optimise the speaker for whatever you are listening to: music, movie or games. Adjustments can be made on the DB1’s OLED display, or via a computer with the downloadable SubApp software.

Perfect partner
Peter Cobbin, recording engineer, Abbey Road Studios: "The B&W 800 Series is the only speaker I have found that allows me to accurately listen to how the original performance has been recorded."

In leading recording studios around the world, music that will soon be heard everywhere is heard first through 800 Series speakers. At Abbey Road, sound engineers depend on the speakers, safe in the knowledge that what they hear in the control room is as close as possible to the sound of the performance in the studio. In California, Skywalker Sound is where Hollywood puts music to movies. And they do it on the ultimate surround sound system, featuring Bowers & Wilkins 800 Series speakers.
Diamond tweeter
- Diamond dome, Nautilus tapering tube design.
- Quad magnet motor system, Tweeter-on-top geometry.

Kevlar midrange
- Woven Kevlar midrange driver.
- FST surround: Spherical head enclosure moulded from Marlan.

Matrix
- Internal bracing system for cabinet stability.

Rohacell bass
- Rohacell foam/carbon fibre composite bass driver.
- Dual magnet motor system, 75mm voice coil.

Terminal
- Oxygen Free Copper (OFC) terminals for improved signal quality.

Crossover
- Gold/Silver/Oil capacitors in high frequency crossovers for improved signal to tweeters and superior sound quality.

Flowport
- Reflex port technology for optimum bass performance and minimum turbulence distortion.

800 Diamond

The speaker of choice for the world’s most demanding recording studios, and a legend among serious sound enthusiasts everywhere, the 800 Diamond is the top speaker in the range – and very probably the finest speaker you will ever hear.

The speaker of choice for the world’s most demanding recording studios, and a legend among serious sound enthusiasts everywhere, the 800 Diamond is the top speaker in the range – and very probably the finest speaker you will ever hear.
If you’re looking for a speaker with the power, clarity and presence of the mighty 800 Diamond, but your listening area can’t quite accommodate its studio-sized proportions, the 802 Diamond is the answer. Retaining the groundbreaking spherical head design of its bigger brother, it’s the closest you’ll get to true studio sound at home.

**802 Diamond**

**Diamond tweeter**
Diamond dome, Nautilus tapering tube design. Quad magnet motor system. Tweeter-on-top geometry.

**Kevlar Midrange**
Woven Kevlar midrange driver. FST surround. Spherical head enclosure moulded from Marlan.

**Matrix**
Internal bracing system for cabinet stability.

**Rohacell bass drivers**
Rohacell foam/carbon fibre composite bass driver. Dual magnet motor system, 38mm voice coil.

**Terminal**
Oxygen Free Copper (OFC) terminals for improved signal quality.

**Crossover**
Gold/Silver/Oil capacitors in high frequency crossovers, for improved signal to tweeters and superior sound quality.

**Flowport**
Reflex port technology for optimum bass performance and minimum turbulence distortion.

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**Options**
- Rosenut
- Cherrywood
- Piano Black Gloss
The 803 Diamond might look almost as imposing as the 802 Diamond, but thanks to its smaller footprint and more traditional cabinet design, it will fit more easily into a home environment. With three massive 7 inch Rohacell bass drivers, it delivers almost as much bass as the 802 Diamond, fitting even the largest of domestic rooms with rich, stunningly lifelike sound.

Diamond tweeter: Diamond dome, Nautilus tapering tube design, Quad magnet motor system, Tweeter-on-top geometry.

Kevlar Midrange: Woven Kevlar midrange driver, FST surround.

Rohacell bass drivers: Rohacell foam/carbon fibre composite bass driver, Dual magnet motor system, 38mm voice coil.

Matrix: Internal bracing system for cabinet stability.

Terminal: Oxygen Free Copper (OFC) terminals for improved signal quality.

Crossover: Gold/Silver/Oil capacitors in high-frequency crossovers, for improved signal to tweeters and superior sound quality.

Flowport: Reflex port technology for optimum bass performance and minimum turbulence distortion.
The elegant floorstanding 804 Diamond offers a commanding acoustic presence, and incorporates diamond tweeter technology for the first time. A true three-way design, it also features two Rohacell bass units and a woven Kevlar FST midrange driver. This combination ensures that it delivers pin-sharp clarity all the way up the frequency range.
You asked for it. And now you’ve got it. The 805 Diamond is an industry world-first for a speaker of this size and at this price point – the only one of its kind to incorporate true studio-grade technology in the form of a diamond dome tweeter. Experience remarkable, lifelike sound from a discreet speaker that fits almost anywhere.

805 Diamond

Diamond tweeter
Diamond dome. Nautilus tapering tube design. Quad magnet motor system. Tweeter-on-top geometry.

Matrix
Internal bracing system for cabinet stability.

Kevlar Bass/Midrange
Woven Kevlar bass/midrange driver.

Flowport
Reflex port technology for optimum bass performance and minimum turbulence distortion.

Terminal
Oxygen Free Copper (OFC) terminals for improved signal quality.

Crossover
Gold/Silver/Oil capacitors in high-frequency crossovers, for improved signal-to-tweeters and superior sound quality.
If you’re looking for a centre-channel dialogue speaker to use as part of an 800 Diamond home theatre set-up, HTM2 Diamond provides all the clarity and richness you need for larger viewing spaces. That’s down to a three-way design featuring two dedicated bass drivers – and, of course, a diamond dome tweeter.

Perfect for smaller viewing areas, the HTM4 Diamond centre-channel speaker will seamlessly balance the sound in an 800 Diamond home theatre set-up, thanks to highly advanced, complementary technology like a Kevlar bass/midrange driver and – for the first time ever – a diamond dome tweeter unit.
## Specifications

### 803 Diamond

**Technical features**

- Free-mounted diamond dome tweeter
- Nautilus tube tweeter loading
- Quad magnet tweeter motor
- Kevlar brand fibre cone FST midrange
- Rohacell cone bass
- Dual magnet bass driver motor
- Matrix cabinet
- Roseport

**Description**

3-way warded box system

**Drive Units**

- 1x ø25mm (1in) diamond dome high-frequency
- 1x ø50mm (2in) woven Kevlar cone FST midrange
- 2x ø150mm (6in) Rohacell cone bass

**Frequency range**

- 6dB at 5kHz and 6kHz

**Frequency response**

- 32Hz – 20kHz ±3dB on reference axis
- -6dB at 2kHz ±3dB on reference axis

**Dispersion**

- Within 2dB of reference response
  - Horizontal: over 60º arc
  - Vertical: over 10º arc

**Sensitivity**

- 90dB at 1W/1m

**Harmonic distortion**

- 2nd and 3rd harmonics (90dB, 1m)
  - <1% 3kHz – 10kHz
  - <0.5% 6kHz – 10kHz

**Nominal impedance**

- 8Ω (minimum 3.1Ω)

**Crossover frequencies**

- 350Hz, 3kHz, 6kHz

**Recommended amplifier power**

- 350W – 2000W into 8Ω on unclipped programme

**Max. recommended cable impedance**

- 0.1Ω

**Dimensions**

- Height: 1164mm (45.8in) not including feet
- Width: 306mm (12in)
- Depth: 457mm (18in)

**Net weight**

- 41kg (90 lb)

**Finishes**

- Cherrywood
- Rosenut
- Piano Black Gloss

**Grille**

- Black cloth

### 804 Diamond

**Technical features**

- Free-mounted diamond dome tweeter
- Nautilus tube tweeter loading
- Quad magnet tweeter motor
- Kevlar brand fibre cone FST midrange
- Rohacell cone bass
- Dual magnet bass driver motor
- Matrix cabinet
- Roseport

**Description**

3-way warded box system

**Drive Units**

- 1x ø25mm (1in) diamond dome high-frequency
- 1x ø150mm (6in) woven Kevlar cone FST midrange
- 2x ø165mm (6.5in) Rohacell cone bass

**Frequency range**

- 6dB at 5kHz and 6kHz

**Frequency response**

- 38Hz – 28kHz ±3dB on reference axis
- -6dB at 3kHz ±3dB on reference axis

**Dispersion**

- Within 2dB of reference response
  - Horizontal: over 60º arc
  - Vertical: over 10º arc

**Sensitivity**

- 90dB at 1W/1m

**Harmonic distortion**

- 2nd and 3rd harmonics (90dB, 1m)
  - <1% 90Hz – 100kHz
  - <0.5% 120Hz – 100kHz

**Nominal impedance**

- 8Ω (minimum 3.1Ω)

**Crossover frequencies**

- 350Hz, 3kHz, 6kHz

**Recommended amplifier power**

- 50W – 200W into 8Ω on unclipped programme

**Max. recommended cable impedance**

- 0.1Ω

**Dimensions**

- Height: 1020mm (40.2in) not including feet
- Width: 238mm (9.4in)
- Depth: 351mm (13.8in)

**Net weight**

- 27kg (59 lb)

**Finishes**

- Cherrywood
- Rosenut
- Piano Black Gloss

**Grille**

- Black cloth

### 800 Diamond

**Technical features**

- Free-mounted diamond dome tweeter
- Nautilus tube tweeter loading
- Quad magnet tweeter motor
- Kevlar brand fibre cone FST midrange
- Sphere/tube midrange enclosure
- Rohacell cone bass
- Dual magnet bass driver motor
- Matrix cabinet
- Roseport

**Description**

3-way warded box system

**Drive Units**

- 1x ø25mm (1in) diamond dome high-frequency
- 1x ø150mm (6in) woven Kevlar cone FST midrange
- 2x ø250mm (10in) Rohacell cone bass

**Frequency range**

- 6dB at 5kHz and 6kHz

**Frequency response**

- 32Hz – 28kHz ±3dB on reference axis
- -6dB at 2kHz ±3dB on reference axis

**Dispersion**

- Within 2dB of reference response
  - Horizontal: over 60º arc
  - Vertical: over 10º arc

**Sensitivity**

- 90dB at 1W/1m

**Harmonic distortion**

- 2nd and 3rd harmonics (90dB, 1m)
  - <1% 60Hz – 10kHz
  - <0.5% 120Hz – 10kHz

**Nominal impedance**

- 8Ω (minimum 3.1Ω)

**Crossover frequencies**

- 350Hz, 4kHz

**Recommended amplifier power**

- 50W – 1000W into 8Ω on unclipped programme

**Max. recommended cable impedance**

- 0.1Ω

**Dimensions**

- Height: 1180mm (46.5in) including rollers
- Width: 450mm (17.7in)
- Depth: 645mm (25.4in)

**Net weight**

- 102kg (225 lb)

**Finishes**

- Cherrywood
- Rosenut
- Piano Black Gloss

**Grille**

- Black cloth

### 802 Diamond

**Technical features**

- Free-mounted diamond dome tweeter
- Nautilus tube tweeter loading
- Quad magnet tweeter motor
- Kevlar brand fibre cone FST midrange
- Sphere/tube midrange enclosure
- Rohacell cone bass
- Dual magnet bass driver motor
- Matrix cabinet
- Roseport

**Description**

3-way warded box system

**Drive Units**

- 1x ø25mm (1in) diamond dome high-frequency
- 1x ø150mm (6in) woven Kevlar cone FST midrange
- 2x ø200mm (8in) Rohacell cone bass

**Frequency range**

- 6dB at 5kHz and 6kHz

**Frequency response**

- 34Hz – 28kHz ±3dB on reference axis
- -6dB at 2kHz ±3dB on reference axis

**Dispersion**

- Within 2dB of reference response
  - Horizontal: over 60º arc
  - Vertical: over 10º arc

**Sensitivity**

- 90dB at 1W/1m

**Harmonic distortion**

- 2nd and 3rd harmonics (90dB, 1m)
  - <1% 45Hz – 100kHz
  - <0.5% 80Hz – 100kHz

**Nominal impedance**

- 8Ω (minimum 3.1Ω)

**Crossover frequencies**

- 350Hz, 4kHz

**Recommended amplifier power**

- 50W – 500W into 8Ω on unclipped programme

**Max. recommended cable impedance**

- 0.1Ω

**Dimensions**

- Height: 1135mm (44.7in) not including feet
- Width: 368mm (14.5in)
- Depth: 563mm (22.2in)

**Net weight**

- 72kg (159 lb)

**Finishes**

- Cherrywood
- Rosenut
- Piano Black Gloss

**Grille**

- Black cloth
**HTM4 Diamond**

**Drive Units**
- 1x ø50mm (1.97in) diamond dome high-frequency
- 1x ø165mm (6.5in) woven Kevlar cone bass/midrange

**Frequency range**
- 48Hz – 20kHz ±3dB on reference axis

**Dispersion**
- Within 3dB of reference response
  - Horizontal: over 60º arc
  - Vertical: over 10º arc

**Sensitivity**
- 88dB spl (2.83V, 1m)

**Harmonic distortion**
- 0.1% 100Hz – 100kHz
- 0.05% 150Hz – 100kHz

**Nominal impedance**
- 8Ω (minimum 4Ω)

**Crossover frequencies**
- 6kHz

**Recommended amplifier power**
- 50W – 120W into 8Ω on unclipped programme

**Dimensions**
- Height: 299mm (11.7in)
- Width: 486mm (19.1in)
- Depth: 287mm (11.3in)

**Net weight**
- 12.5kg (27 lb)

**Cabinet**
- Cherrywood
- Rosenut
- Piano Black Gloss

**Grille**
- Black cloth

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**HTM2 Diamond**

**Drive Units**
- 1x ø50mm (1.97in) diamond dome high-frequency
- 1x ø150mm (6in) woven Kevlar cone FST midrange
- 2x ø180mm (7in) Rohacell cone bass

**Frequency range**
- 41Hz – 28kHz ±3dB on reference axis

**Dispersion**
- Within 3dB of reference response
  - Horizontal: over 60º arc
  - Vertical: over 10º arc

**Sensitivity**
- 90dB spl (2.83V, 1m)

**Harmonic distortion**
- 1% 100Hz – 100kHz
- 0.5% 100Hz – 100kHz

**Nominal impedance**
- 8Ω (minimum 4Ω)

**Crossover frequencies**
- 6kHz

**Recommended amplifier power**
- 350Hz, 4kHz
- 50W – 300W into 8Ω on unclipped programme

**Dimensions**
- Height: 329mm (13in)
- Width: 841mm (33.1in)
- Depth: 387mm (15.2in)

**Net weight**
- 31kg (68 lb)

**Cabinet**
- Cherrywood
- Rosenut
- Piano Black Gloss

**Grille**
- Black cloth

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**Technical features**

**Drive Units**
- Frequency range
- Frequency response
- Dispersion
- Sensitivity
- Harmonic distortion
- Nominal impedance
- Crossover frequencies
- Recommended amplifier power
- Max. recommended cable impedance

**Dimensions**
- Height
- Width
- Depth

**Net weight**
- 12kg (26 lb)

**Cabinet**
- Cherrywood
- Rosenut
- Piano Black Gloss

**Grille**
- Black cloth

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**Technical features**

**Drive Units**
- Frequency range
- Frequency response
- Dispersion
- Sensitivity
- Harmonic distortion
- Nominal impedance
- Crossover frequencies
- Recommended amplifier power
- Max. recommended cable impedance

**Dimensions**
- Height
- Width
- Depth

**Net weight**
- 12.5kg (27 lb)

**Cabinet**
- Cherrywood
- Rosenut
- Piano Black Gloss

**Grille**
- Black cloth