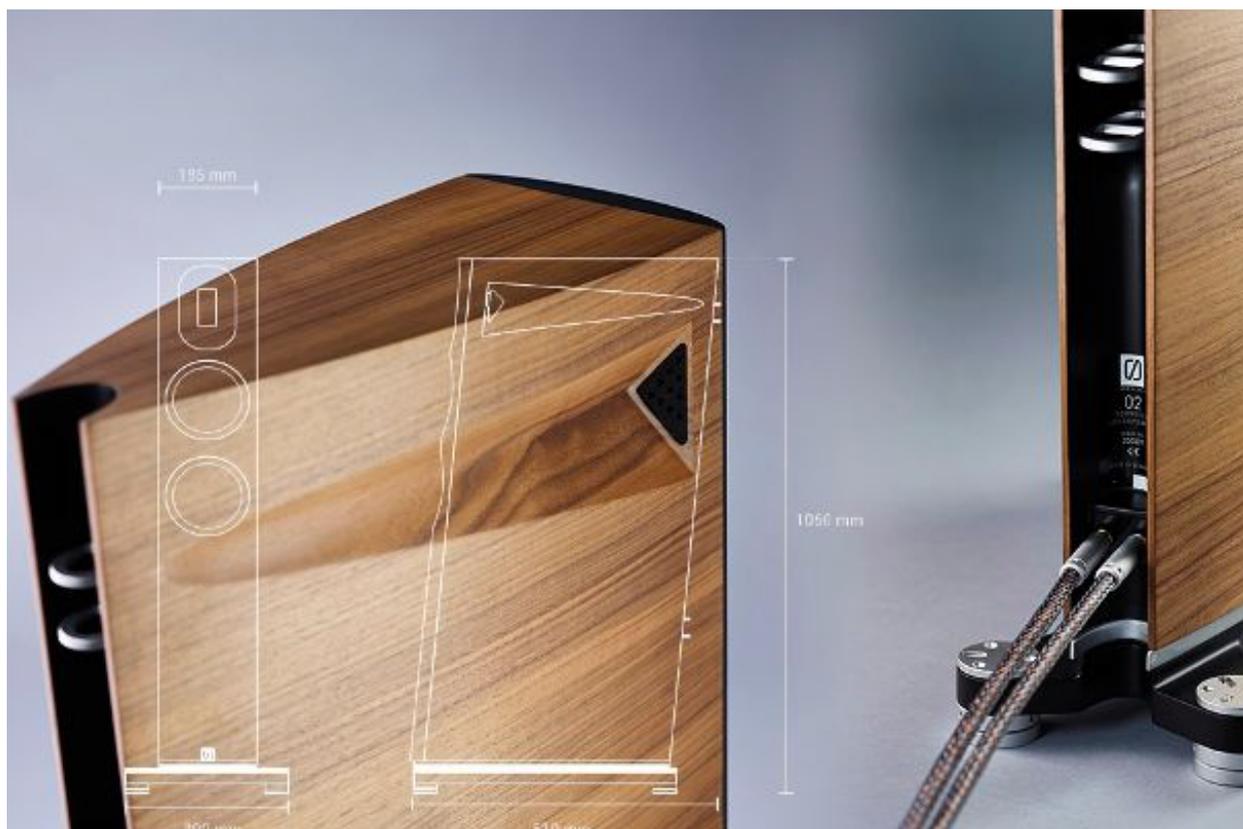


# Highest Perfection

## Test Børresen 02 floorstanding loudspeaker

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Our test object: The Børresen 02

Børresen Acoustics, still unknown in this country Switzerland, belongs to the young Danish brand trio Aavik Acoustics, Ansuz Acoustics and Børresen Acoustics. The Danish trio "Audio Group Denmark" is based in Aalborg, Denmark's northernmost city.

The trio emerged from the loudspeaker company Raidho Acoustics. In 2017, Raidho was acquired by Dantax. The current decision-makers at Børresen, Aavik and Ansuz left Raidho Acoustics to found the three new companies.

Lars Kristensen, co-managing director and sales manager, emphasized that it is safer to operate in the market with three different brands representing different product lines. If one line should fail to meet expectations, it can be sold or discontinued without affecting the remaining two lines. In addition, the three product lines complement each other ideally. Also, this allows a retailer to choose just one or two product lines without "having to" take over all three brands into their his product range.

In this review, we turn to the floor-standing speaker model Børresen 02.

## Børresen Acoustics ApS

Michael Børresen who founded the company of the same name, is a mastermind and perfectionist.



Michael Børresen

One of his favorite topics is vibrations. Already in his final thesis as an engineer, he dealt with resonances and vibration patterns. In doing so, he first applied all of his knowledge outside the audio industry. Understanding and controlling vibrations has been one of the main goals of his developments, he says.

He questioned everything related to loudspeaker design. If you ask a lot of questions, you will find a lot of answers - and in the best case, that leads to outstanding loudspeakers. When Michael Børresen and his team embarked on the challenging path of creating his "ultimate" loudspeaker, they set themselves the following development goals:

Revising existing driver technology, fundamentally optimizing the crossovers, and rigorously controlling resonance on the cabinet.

The Børresen website immodestly claims an unprecedented musical authenticity as well as an absolute balance and naturalness. Compared to the Z-series, the 0-series offers an even more pronounced clarity in the midrange, a deeper bass reproduction and an amazingly holistic, authentic soundstage. Whether Børresen Acoustics can live up to this claim is something, we will try to test on the Model 02.



All models in the Børresen 0 series with Model 02 on the far left.

## The Model 02 in detail

Børresen speakers are available in a basic version and also as "Børresen Cryo Edition" as well as "Silver Supreme Edition". The latter is only available for the 0-series.

In the "Børresen Cryo Edition," all metal parts of the speaker are subjected to a cryogenic cold treatment. First, a slow cooling phase takes place over 24 hours, down to minus 196° C. Then, the extremely low temperature of the metal parts is maintained for another 24 hours. Then, over the next 24 hours, it goes back to room temperature.

The effect of rapid cryogenic treatments aimed at improving sound quality is controversial. This is because the desired crystalline changes are reversed again. To prevent this from happening, the process is slowed down at Børresen.

According to Børresen, the structural changes in metallic components that result from the cooling process should also increase the conductivity of silver coils by 6 to 8%. They would thus have a positive influence on the "audio properties."

The cooling process is carried out by Børresen Acoustics in its own workshops.



All models in the Børresen 0 series with Model 02 on the far left.

The "Silver Supreme Edition" is only offered with the 0 series. As the name suggests, it describes the consistent and expensive use of pure silver also for non-conductive elements. For example, the copper pole rings in the drivers' magnetic drive are also replaced with those made of cryogenically treated silver. This should bring induction down to unprecedented levels.

In the following video, Børresen explains the motives and the technology behind the enormously elaborate treatment of his high-tech speaker drivers.

## The Børresen Model 02

The Børresen Model 02 is the smallest floor-standing speaker in the 0 line. With the exception of the compact 01 monitor, all three floor-standing speakers operate with 2.5 ways and differ in the number of woofers/midrange drivers and the cabinet dimensions.

The floor-standing 02 speakers have a narrow width of 26 cm and are 51 cm deep. With a height of 106 cm, they weigh a good 30 kg. Due to the narrow front width, they appear slim and extremely living room friendly. In addition to the considerable cabinet depth, there should be enough space in the listening room for at least 50 cm distance to the rear wall. The recommended minimum distance from baffle to rear wall is thus one meter.

The frequency range is specified in the data sheet from 40 Hz to a very high 50 kHz, thanks to the ribbon tweeter. The efficiency of 88 dB is still okay, but requires sufficient amplifier power. The nominal impedance is 4 Ohm. Børresen grants a five-year warranty on all of its products.

We heard the Børresen 02 model in the basic version including the high-tech Ansuz Darkz T2 absorber feet, another Børresen specialty. With a price tag of CHF 42,200, it is certainly at the upper end of the price range for a dynamic loudspeaker of this size.

The consistent attitude to technologically tickle out a maximum from every detail - whether this is sonic or processing reasons - combined with a small series production in Denmark, express themselves here.



The depth of the cabinet creates quite an extraordinary optical charm.

The packaging and the included accessories of the Børresen's 02 are top-notch, but also a matter of course for speakers in this price range.



Perfection in every detail: Diffusers for the reduction of flow noise.

## Cabinet

The Børresen 02 is available exclusively in walnut. The workmanship is absolutely impeccable. Børresen has the cabinets manufactured by the Danish manufacturer Sino Factory. There, Børresen is in good company with Dynaudio and Sonus Faber. The design has Danish features - including the corresponding understatement.

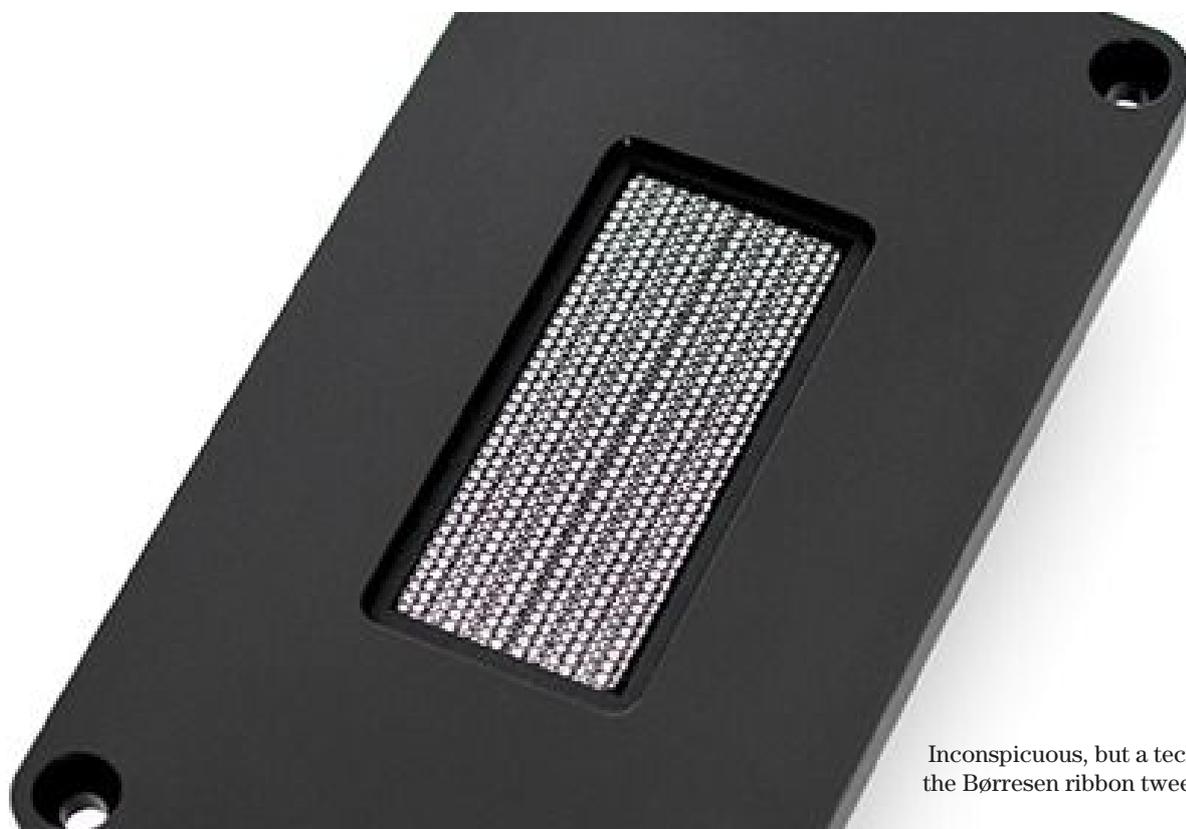
I noticed the "screwless" construction in a positive way. You look for screws in vain. Here, Børresen takes a more expensive and sophisticated path. The matt black front cover is solid and forms a wave guide for the tweeter with the effect of widening the baffle slightly, so that the wavelength of the lower limit frequency of the ribbon is just undercut. This measure should also have the effect of amplifying the sound. The knock test at the front certifies the best possible freedom from resonance for the unknown material.

If you take a look at the back of the speaker, you will notice the bottle opener-like aluminum parts. These are a kind of diffusers designed to reduce the flow noise of the bass reflex ports. Like everything at Børresen, these parts are tailor-made components and manufactured with great attention to every detail.

However, the real "stars" are the ribbon tweeter and the high-tech woofer/midrange driver chassis.

## The tweeter chassis

The tweeter is an advancement of the Philips-ribbon-tweeter.



Inconspicuous, but a technical gem:  
the Børresen ribbon tweeter.

The open dipole magnetostatic driver has a foil membrane that weighs only 0.01 g and is made of a special foil. The magnet material is the extremely strong N-52 super neodymium. It is also used in the low-midrange drivers. The efficiency is a fabulous 96 dB, and the impedance is 6 Ohm.

## The bass-midrange drivers

Like the ribbon tweeter, the 13 cm woofer/midrange drivers installed in the Børresen 02 have magnets made of N-52 neodymium. The cone consists of a 4-millimeter-thick Nomex core coated with two layers of non-woven carbon fiber from the Japanese manufacturer Toray from Osaka. Among other things, Toray Industries also manufactures wing parts for Formula 1 and supplies the aerospace industry. The copper-plated aluminum voice coil of the low-midrange chassis sits on a vented titanium carrier.



The spectacular bass-midrange driver, here in the silver version.



The high-quality crossover with eye-catching SMT components.



The connection terminal (only for Banana plugs) and the Ansuz Darkz T2 feet in detail.

## Listening test and conclusion

The manufacturer recommends a minimum break-in listening time of 50 to 100 hours. The speaker should only reach about 90 percent of the achievable quality after 500 hours. Good things definitely take time.

When positioning the speakers, the manufacturer recommends a minimum distance of 50 cm from the rear wall. In Alesca's show – and listening room, the 02 stand freely in the room, which mostly does not correspond to the living room reality and thus also feigns the acoustic space in depth - space that is not even present on the sound recordings.

Alessandro Calo recommends rather 80 to 90 cm distance to the rear wall, always depending on the size of the room as well as the materials used. The angling to the listening position was minimal, the manufacturer recommends a stereo triangle that converges behind the listener. Here, of course, you can and may be should experiment with, as well as with the distance between the speakers. Due to the spacious room, the distance was 4 meters for the test speakers, but this will definitely not be feasible in every listening room. Børresen recommends a minimum base width of 3 meters.

The test system consisted of Aavik components. All cabling was from Ansuz and Stealth. Another test report on Aavik and Ansuz is in the pipeline.

We started with guitar recordings, where the 02 played out its first strength, namely the almost holographic resolution: It placed the guitar tangibly in the room. As a "resolution fan", I was thrilled and very taken with it.

The 02 played absolutely controlled even at higher levels in the high frequency range and kept



Grandiose listening room - ideal for the listening test!

their composure. After prolonged listening, one became really relaxed - another indication that these speakers do a lot of things right. Overly analytical speakers usually sound spectacular during the first five minutes, but then tire pretty quickly. Not so the Børresen 02.

Voices came with smoothness and warmth. The Aavik integrated amplifier could shine in combination with the Børresen speaker: The combo sounded round and organic, a dream pairing, as I found.

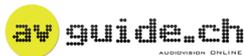
It continued with piano music: the coherence was exemplary. The bass reproduction of quick electric impulses ("Strange Cargo", William Orbit) came fast, precise and with the necessary pressure. I would confirm 40 Hz as the lower cutoff frequency. However, it didn't go any further down into the bass basement.

To put the Børresen 02 even further to the test, I brought along my own tube amplifier for a listening test comparison: 10 Watt Class A and push-pull. We wired it to the rest of the system. The sound was now suddenly perceived as slower, almost cozy - the Børresen speakers showed the sonic difference with merciless clarity. The 02 boasted monitor qualities and didn't gloss over anything, but without drifting into the analytical.

Tonality changed only marginally in the midrange and treble, but bass became a bit slack due to the limited power of the tube amplifier. It clearly emerged that the 02 requires sufficient power and control. Then, the deep basses also come with the necessary pressure and precision.

The more power, the more comfortable these speakers feel. They are like high-performance racehorses: They want and need to be challenged.

The second listening session - also in the Alesca listening room - was attended by two editorial



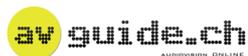
colleagues. Once again, the resolution, the smoothness, the three-dimensionality and the fast bass of the Børresen 02 were impressive. I wandered around the listening room a bit and was impressed how these living room suitable speakers easily filled the large Alesca show – and listening room with music. It created something of a live feeling which is especially valuable in these times of no concert events.

The stage imaging of the 02 was rather large, and because it was in the listening room without a back wall, the depth was also impressive - perhaps a tad too deep. But that will change again with a back wall in a normal listening room.

## Conclusion

Michael Børresen has achieved a lot with his drive for perfection and the search for the perfect loudspeaker technology. From my point of view, the Børresen 02 are high performance loudspeakers in the truest sense of the word. Everything, really everything, has been rethought and perfected down to the smallest screw. It goes without saying that this perfection has its price.

**Mr. Børresen velkommen til Switzerland!**



## FACTSHEET

Model:	02
Type:	Ultra-high-end 2.5-way floor-standing speaker with bass-reflex technology
Pros:	<ul style="list-style-type: none"><li>- Workmanship is flawless</li><li>- High-quality drivers with unique technology</li><li>- Elegant, living-room-friendly design</li><li>- High-resolution, spacious sound</li><li>- Precise, fast bass response</li><li>- Cold treatment and silver conductor material available at extra charge</li></ul>
Cons:	<ul style="list-style-type: none"><li>- Needs an amplifier with punch and control</li><li>- Efficiency closer to 85 dB</li><li>- Price-performance ratio</li></ul>
Price:	42,200.00 CHF
Manufacturer	Borresen Acoustics
Year:	2020
Distribution:	AC Group AG
Dimensions:	260 x 510 x 1055 mm
Weight:	30.5 kg
Color:	Walnut
Bass:	120 mm / 2 pieces
Construction principle:	Bass Reflex
Recommended power:	100 Watt
Frequency response:	40 Hz - 50 kHz $\pm$ 3dB
Tweeter:	Magnetostatic ribbon driver
Impedance:	4 Ohm
Midrange:	n/a
Efficiency:	88 dB

## Onlinelink:

<https://www.avguide.ch/testbericht/test-borresen-02-standlautsprecher-hoechste-perfektion>