



# THE DALI DEN

## INCOMING

On the cusp of release, Dali's upcoming projects include their first-ever portable Bluetooth speaker, a line-up of audiophile in-wall speakers based on the drivers from the Epicon series and a secret project that we can't show you just yet. Indian fans have reasons to cheer!



### The quiet town of Norager, deep in Denmark gives birth to Dali's. WHF (India) takes a grand tour...

**Formed in 1983** in what some would consider the birthplace of Audiophilia, Dali has achieved many milestones but probably the most legendary remains the brand's rightful founder, Peter Lyngdorf, the hi-fi guru behind many of the world's greatest high-end brands. Currently under the competent leadership of Lars Worre as CEO (see interview), Dali is one of the most successful boutique hi-fi brands in the world. There is an infectious passion for relaxed perfection in everyone you encounter within the building. It's the kind of atmosphere that breeds great products, not timelines.

Not one to rush into new products or categories, Dali is known to come to the market with a new offering only when it knows that it has changed the game with engineering and sound. In this 18,500 sq.mt. facility, around 225 employees swear by this brand philosophy and that's why, the entire R&D team is based here and every product upwards of the Opticon range is still built in this factory. Quality is paramount and even their Chinese factory builds speakers only for Dali exclusively.

#### Talking Shop

Probably the most exciting part of any factory visit are the listening sessions in the one room that was designed to make their products sound the best they possibly can and the Dali listening room lived up to every expectation. Delicately draped in white sheer curtains, they conceal strategically treated parts of the wall while leaving an airy feel to the space. The imposing but now defunct Megaline speakers stand tall at more than 7.5ft tall, designed to bring full-scale dynamics and feel of music instruments to the living room. It's partnering Gravity amplifier is also a behemoth, weighing a whopping 100kgs each and generating 100w in pure Class A!

But it was the Epicon 2 bookshelf speakers being driven by a modest NAD amplifier that completely stole the show with its musicality, naturalness of tone and a sonic signature that could have you listening for hours on end without any fatigue. There's also a display room where all the current lines of Dali in-room and in-wall speakers are ready for scrutiny.



#### 1 Dali Katch ₹36,900

Perfectly sized to replace your man clutch, the Katch is a sharp blend of Scandinavian design and typical Dali acoustic principles. It features a 2x25watts RMS amplifier driving a total of four drivers, aided by two passive radiators. Both sides of the aluminum enclosure have drivers that can work in stereo mode, along with DSP modes optimised for placement.



#### 2 Phantom S-Series In-wall ₹TBA

Although not in their production stage, a chance to audition the promising new high-end in-wall series speakers wasn't to be missed. To be available in three sizes with custom designed enclosures, they epitomise installation simplicity. Expected price? Around the Rs. 1.5lacs (each) for the largest, S280.



#### 4 Phantom S-Series In-wall ₹TBA

With an internal volume ranging from 19lts to 40lts, the Phantom S-Series features the hybrid tweeter module borrowed from the floorstanding Dali speakers but the wood fibre cones are custom designed for the new cabinets. S80, S180 and S280 will be the three models.



# ENGINEERING THE

*The very basis of Dali's engineering comes from the belief that music on loudspeakers cannot be appreciated in a 10 second demo. Instead, their speakers are painstakingly designed to dissapear from the room...*



### 1 Wood sourcing

Every handmade speaker starts its journey from MDF and for the Opticon series, the MDF is sourced from Scotland. The rolls of veneers in different finishes are then cured and wrapped on each cabinet with a process that causes minimum wastge.

### 2 Cabinet making

Every Dali speaker made in the Norager factory is handled by a single worker. This allows them to maintain consistency in production and the number of processes that each cabinet undergoes as a quality check is exhaustive. It includes a light test to check for finish smoothness and a humidity test for climatic effects!

### 3 Baffle curation

Here, the baffles of the Opticon series are screened for quality control and initial stages of assembly take place. New suppliers are always srutinised heavily and Dali prides itself on the fit and finish of its loudspeaker cabinets.



# MARVEL

*Amongst the many patents and engineering innovations that this factory has seen, the most recent and ear-popping development has been in the field of drive unit magnetics. SMC is the secret sauce and it's what makes Dali sound so very special...*



### 1 Epicon craftsmanship

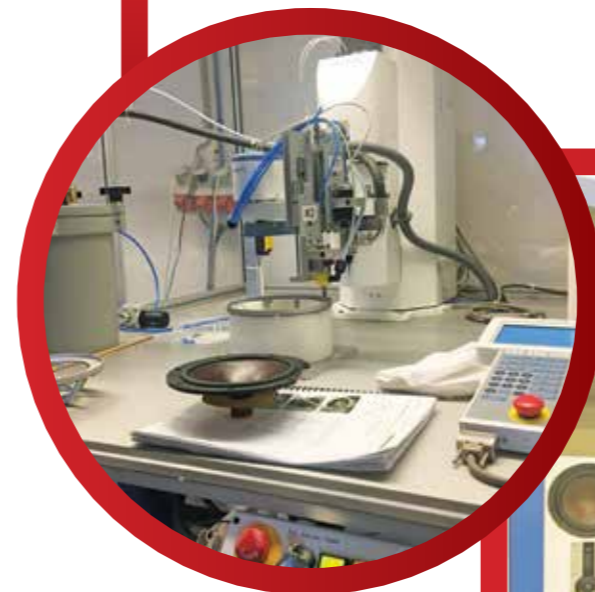
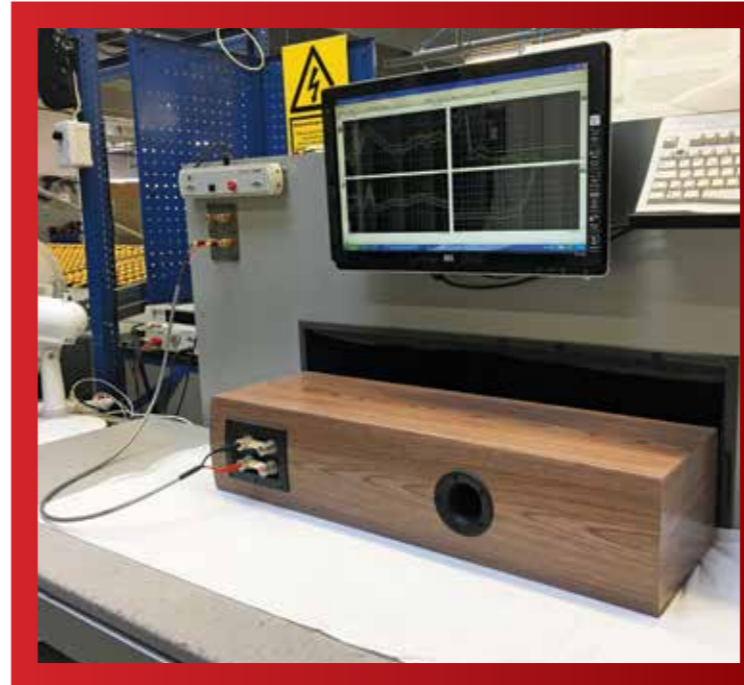
The cabinets for the flagship Epicon series aren't made entirely in the Dali factory because of the hugely complicated process but when they do arrive at the facility, each unit is checked under two different kinds of light temperatures so any imperfection is instantly seen and rectified. The best of the best from the Dali pool of staffers work on the Epicon series so every finished product looks like a piece of art.

### 2 Speaker testing

Since the last five years, driver manufacturing is done entirely in-house and with a robotic jig, manufacturing time has come down from 7 mins to 1min per driver! Epicon and Rubicon series drive units are made in this facility and even a 0.1% change in tolerance is rejected. The use of SMC (Soft Magnetic Compound) reduces hysteresis loss and makes it an easier load for amps too.

### 3 Referencing the speakers

A "reference" model of every Dali speaker every produced is maintained in the factory. This helps engineers to compare any defective sample to the original, even years after production has ceased.



# MAKER'S MARK

*Not many loudspeaker brands manufacture every component under the same roof and Dali prides itself in its Danish engineering and innovation.*



**Denmark is synonymous** with legendary audio engineering and Dali might just be one of the most significant parts of that legend because after all, its name itself stands for Danish Audiophile Loudspeaker Industries. But the real reason why it commands the respect from both critics and audiophiles is because of the truth in their engineering. They have avoided the usual clichés of fancy cabinets, heavy marketing jargon and the intimidating price tags that plagues many in this segment. Instead, they believe in making real progress with behind-the-scenes science. The deeper you dig into the concept and logic behind its use of the hybrid tweeter module which uses both a ribbon tweeter and a soft-dome to reproduce HF, the use of SMC (Soft Magnetic Compound) in its driver magnet systems or the use of wood pulp as the choice of cone material, the clearer it gets that Dali isn't a brand to rush into a new product launch.

## **Hands-on approach**

Everyone at Dali is involved in the brand beyond the call of duty and that's the advantage they have keeping manufacturing of all lines Opticon and above in the Danish factory. For the Zensor and other entry-level products, in 2008, Dali set-up a factory in Ningbo, China but chose to do it on their own terms with their own team. Avoiding the usual pitfall of mass manufacturing in China, the Dali factory is exclusive to the brand and allows them to maintain the same obsessive quality while keeping the costs to a more affordable price point. The Dali Meneut is a prime example of how a simple yet well-engineered compact speaker can go on to win so many awards and hearts! In fact, Dali was kind enough to stop its assembly line for a few hours and allow me to have a hands-on assembling experience. It's a brand that values music and people above all else and it shows!



## THE DALI DEN INTERVIEW



**"We have a strong partner in Audio One and India is a tough market to be in."**

Lars Worre - CEO, DALI



# The hi-fi company that loves to make music!

As the man at the helm of a proudly Danish brand, Lars Worre speaks to *Nishant Padhiar* about the importance of a brand build on solid engineering and manufacturing principles.

**What prompted DALI to move into the direction of a portable BT speaker like the Katch, much later than the competition?**

Well, first of all we never intended to be "first movers" within new product categories. DALI is a "refiner" within existing categories and the Katch belongs to a category of handy, portable speakers already defined in the market over the last 5-6 years.

We have encountered a huge interest for such speaker types and we realize that this category may, for these particular "new" users, define what could be the primary loudspeaker source for music listening. And perhaps the only one! This may sound sad, in one way, at least from a hi-fi enthusiast point of view. But it is also very interesting, as these users have obviously decided to upgrade from their standard mobile telephone sound and into a real speaker. We went out and listened to a lot of different products in this category, and purchased even more representative models after which we came to

a quite simple conclusion - this can be done better! Sonically, design wise and overall quality wise. We knew it was not going to be the least expensive product, but we saw chances for improvement for relative little extra cost! So the question was "how we can put DALI virtues and values in such a compact product in a highly competitive market?". That was in fact the background, and the result is.... the Katch!

**India has seen a steady growth for DALI as a brand. Do you attribute it to price sensitive products like the Opticon and the Zensor series or the Phantom install series?**

Well all of them. India is an important market for DALI - not only because of the size of the market, but also because we feel that the DALI way of thinking about sound fits the Indian consumer very well. Speaking of the PHANTOM install speakers, the relative interest for custom install is in fact a bit higher in India than in Europe.

Having said that we are perfectly fine with the current "mix" in India and even if we would end up seeing a higher ratio of more inexpensive models. In fact we might prefer being present in a higher number of homes and listening rooms than if the volume was low and limited to just a few high-end deals here and there.

**With so much emphasis on engineering, what is the typical development time for a new DALI product, from drawing board to series production?**

It varies quite a bit but let's generalize here. Even though we would love to say it, we're not really fast on this. It takes time, and the average project time is around 1.5 years. But if you include the time of conceptualization and many pre tests, experiments and decisions made before the project take-off, we're actually closer to 2 years for a product. That is from idea to launching, but ahead of this process may lie technology projects in

R&D as well. As an example we worked on the development of SMC drivers for several years before we even commenced the Epicon project.

**Do you find particular advantages to still manufacturing your higher end range of speakers in Denmark?**

Absolutely. And given the fact that we do manufacture the entire Opticon range in our Danish factory, which is rare at this price point, I believe it would be fair to say that it is more than just the higher end models. We gain advantages in quality, flexibility and in the sense that all the inevitable questions, doubts and recalibrations of all kinds can be done in close collaboration with the R&D department. That is something we find crucial for quality loudspeaker manufacturing. At the same time it is often overlooked how much effect this has on the quality of work preparation from R&D itself as well.

**"There are already many headphones out there, and we haven't yet found a way to really create a valuable difference with our current technologies."**

**The Epicon has remained your flagship range for awhile now and it's been long that the Megaline was pulled out of the market. Is there something DALI is looking at to fill the gap?**

Epicon is as successful as we had hoped and will keep on living for a long time. In fact the sales are growing, so it seems like people have found out what kind of a pearl it is - behind the partly understated and modestly sized exterior. What you're asking about is a bigger brother for Epicon - well we're looking, yes.

**There hasn't been an effort to promote**

**your subwoofers as standalone options with other brand speakers. Is it because they are designed and tuned to work with DALI speakers more than others?**

That may have been the case for quite some years ago, but not any longer. Our current subwoofer range of models is no longer adapted or tuned to DALI speakers in particular but serve the purpose of subwoofers as a general effort. Our approach to making subwoofers is quite different from a typical subwoofer sound, if you'll allow me to generalize a bit. The sound is agile and fast (e.g. have ultra short pass through delay), and are easy to integrate seamlessly with the main speakers.

The European market seems to have fallen for this approach, and subwoofers are becoming a significant part of our business here. But it is fair to say that we're at the beginning regarding a separate promotion of the subwoofers in India. But it will come!

**The Fazon F5 saw critical acclaim for its designer paint job editions. When can we see that again?**

We're glad you liked it. The F5 is running well as a model in the standard range, but the paintbrush versions were, of course, a bit off a show piece, although we believe it was a very serious one of its kind, using unique artistic pieces. It was not cheap though. We take it as encouragement for future ideas like that.

**SMC is clearly your special sauce. How soon do you think the tech will trickle down to more affordable speakers in**

**your range?**

More generally, low-loss, is our special sauce. Low mechanical losses in the speaker design in particular with SMC as an extended low-loss technology in the way it substantially reduces magneto-mechanical losses such as eddy currents in the magnet motor. A few years ago we found it hard to trickle down this technology but as you have noticed it is now available in a cost optimized Option series. That is probably as far as we can go.

**Do you ever get tempted to branch into other categories like electronics or headphones?**

Yes, and we are monitoring the area. To be honest, there are already many headphones out there, and we haven't yet found a way to really create a valuable difference with our current technologies. In case we do, you might find a DALI headphone at some point. But for the time being, well let other players take care of it...

**Audio One has been a strong partner in India for you. According to their feedback, how do you think the market is evolving for DALI with the What Hi-Fi Shows and interest from dealers in getting certified in CEDIA/THX etc?**

We have a strong partner in Audio One and India is also a tough market to be in. However, India is also a huge country with many local preferences, and both dealers and consumers who are rather new to A/V products are constantly emerging. Therefore training and product knowledge are key factors for continued growth. Audio One share this priority, and are extremely committed to establishing and maintaining a dealer network, able to give the best advice to consumers. In my mind it's this long-term focus on conveying relevant and unfiltered knowledge all the way from our acoustic engineers to dealers and consumers that make a difference in the market. But India is so much more than DALI and Audio One. That's why we welcome all efforts in education and promotion of the good message about better reproduced sound and about the A/V industry in general. And in a somewhat fragmented market like India there is a real need for an 'authoritative voice' like What Hi-Fi, which is also why we support efforts like the What Hi-Fi Show etc. It is both our hope and our aim to have more industry stakeholders promote their thoughts on good sound and, not in the least, to demonstrate how this can make a real difference in the home of the consumer.



The Opticon range is the entry point into the world of SMC technology