

seashell

Nautilus, a new premium-class cabin concept for the Airbus A380 mock-up, boasts curves in all the right places

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Inspired by the sea shell form of one of the ocean's oldest creatures, the 'Nautilus' high-end business-class cabin concept currently installed at Airbus's life-size A380 mock-up in Toulouse is proving a hit with airlines, according to Stefanie von Linstow, Airbus's product marketing manager for the A380: "The feedback has been very positive indeed," she says.

Nautilus features 26 seats installed in a 1-2-1 'herringbone' configuration between Doors 2 and 3 on the 'main deck' of the mock-up. A reception desk is included at the front, providing ideal storage for A380 marketing material. With seats at just 47in pitch capable of converting into 2m beds, the configuration balances efficiency and comfort extremely well, says Alexandra Collins of Design Investment, which worked with Airbus on Nautilus, as well as an earlier first-class concept installed in the front section of the upper deck of the mock-up. "An essential part of the competition was to carry out a study into the most efficient use of space," explains Collins. "Our results conferred with Airbus's own internal findings."

"The key words included in the brief for this project were innovative, full flat, efficient, comfort, an enhanced feeling of space, and something that would grab the attention of visitors to the mock-up," adds Airbus's von Linstow. "Sometimes visitors don't have that much time to look around, so we needed a design that they could 'get' quickly and that made a lasting impression – it needed to be eye-catching in some sort of way."

The 'catchy' name also went down well with Airbus's marketing team: "They fell in love with the name from the





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very beginning,” says Collins. “Nautilus really captures some of the concept’s key ideas. It’s about a shell that protects you, with a rigid look and feel from the outside – but inside, it gives you a very cosy feeling of privacy and comfort.”

Airbus also liked the fact that it was tailored specifically to the A380’s cabin architecture: “Many premium products look great on their own, with lots of clean straight lines, but when you put them inside the curves of a cabin, they look out of place,” says Collins. “We really worked hard to integrate Nautilus with the softer line of the A380 cabin – having a design inspired by a more natural, rounded form helped.”

CLEVER CURVES Nautilus’s real triumph comes from its combination of a herringbone concept, which not only boosts efficiency but also ensures every passenger has direct aisle access, with its clever, sculpted ‘shell-like’ form, which gives the maximum living space where it is most needed – around the shoulders. Although the seat itself is only 20in wide, Nautilus has a much larger shoulder width (29in at its widest point) – only 5in less than the widest business-class product currently flying, on Singapore Airlines’ A380s (SIA has 60 34in-wide seats at 52in pitch across 60% of the upper deck), but within a more efficient layout.

When the seat is fully reclined, the curved armrests automatically retract down, creating room for the passenger to twist and turn to find a comfortable position to sleep. The seat also incorporates Lantal’s pneumatic seat cushion technology, which uses air pressure to adjust the softness or hardness of the seat/bed, according to passenger preference.

Meanwhile the inner shell features a padded fabric finish, cocooning the passenger in a soft and comforting

environment, described by Collins as a “micro suite”. The material was also chosen for its sound absorption qualities, which help reduce cabin noise levels even further – the A380 features the quietest cabin currently flying. “The material has been certified for use in a VIP aircraft project,” notes Collins. “It would need to undergo further testing for commercial aircraft use, but that’s the point of a project like this – to push the boundaries and look at new materials under development.”

The shape of the Nautilus shell is such that it facilitates easy access to the seat, while also providing a ‘soft centre’ – the perfect environment for passengers to relax and read or watch a movie in, whether the seat is fully flat or reclined at an angle. “A rigid shell in combination with a soft interior protects the passenger and guarantees his well-being,” says Collins. “The floating lines and soft finish of the interior appear comforting and very ‘Zen’.”

LIGHT SHOW Nautilus also uses accent lighting to help create a calm and relaxing impression – and to emphasise the personal space available to passengers. “The lighting strip incorporated into the shell surround was introduced as a mock-up feature, i.e. to make people aware of the seat’s USP when in bed position,” explains Collins. “An LED light animation creates a pulsing light above the round armrest. When the seat is in bed position, the light strip continues around into the seatback shell – this is when the ample bed space becomes evident.”

The fabric shell lining even includes illuminated floating bubbles – suddenly ‘sleeping with the fishes’ sounds less of a threat and more of a treat! “The whole thing has a show effect – you wouldn’t necessarily do that in reality,” admits

- 01. The herringbone configuration provides aisle access from every seat and increases efficiency
- 02. The sculpted form of inner shell provides passengers with ‘micro suites’ to relax in, as well as vital shoulder space when sleeping

project team

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03



04

- 03. A lighting strip is integrated into the inner seat shell, along with illuminated bubbles
- 04. Feature lighting and sensuous curves make the most of the A380's cabin architecture

Collins, who worked with German lighting specialist Diehl Aerospace to perfect her ideas. Further lighting accents are found in the footwell, and even in a flower vase incorporated into the side console, as well as an illuminated place number. There's also a 'deco lamp' that Collins sees as a "metaphor to give a more home-like feel to the product".

Another nice touch sees a dedicated compartment for small personal belongings – described by Collins as a "vide-poche" (which translates as 'empty pockets'), it provides a convenient storage place for spectacles, a mobile phone and/or an MP3 player. "The vide-poche is a brown ultra-leather soft-lined amenity tray located under the deco light on the horizontal surface of the ledge," she says. "The idea was to offer an area where the passenger would feel comfortable to store his small but maybe also precious things. The objects are always in eyesight for the passenger, and there's a small power supply for charging electronic devices."

REAL DEAL? Despite being installed in a marketing mock-up, Nautilus could be easily realised as a commercial product, claims Collins. The first two seat rows (eight in total) installed in the mock-up are fully functional – based on Recaro's CL 6510 platform, each seat has five motors. (The partition between central seat pairs is manually driven). However, Collins says an airline interested in developing their own version would be free to work with whichever seat manufacturer they wanted: "In effect this concept could work with any seat mechanism," she says.

"There's a slot where the seat mechanism goes in and you could replace what's inside easily enough."

In theory Nautilus could work just as well on other aircraft types – keen observers at the recent Expo in Hamburg would have noticed the same concept in miniature inside a scale model of the A350 on the Airbus stand. However transferring the concept to another aircraft type would require changes to seat geometry and dimensions, in effect generating a new raft of part numbers. "As soon as you change the footprint, you also have to go through the certification process again," adds Collins.

Design Investment is currently working with a European airline on a new economy seating product – one doubts the carrier in question will opt for the same cream colour scheme (created in collaboration with Airbus's design team) of Nautilus, despite its space-enhancing qualities. "That's the difference," says Airbus's von Linstow. "This is a mock-up and as such we wanted to show off the possibilities of the A380's cabin. We don't have customers walking inside and saying 'we want this and we take it'. It's more an impression to take with them when they configure their own aircraft."

Collins concurs: "Beyond selling the A380, Airbus also wanted to show it is innovative and forward thinking – hence the design competition." With its intelligent mix of comfort and efficiency, Nautilus is a worthy winner. ☒

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