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Tiny flying objects of desire

A German company has become world market leader in building small aircraft miniatures – SriLankan’s Airbuses are among the prized collector’s items. By Andreas Spaeth.

The white Airbus A340-300, completely painted in SriLankan’s livery in every detail up to the red winglets, fits easily into just one hand. It is tiny, compared to the original which measures almost 64 meters in length. This metal model however, copying the real aircraft in stunning accuracy in a scale of 1:500, stretches only about 12 centimetres and weighs less than 140 grams. Still, all the aircraft’s wheels turn and it even bears the registration of an original of the carrier’s fleet. Welcome to the world of Herpa models. The German company of this name (www.herpa.de) has managed to become world market leader in the segment of high-quality, low-price aircraft models within a decade.

Having created a highly regarded brand name, the company is selling its ever more diverse product range to a worldwide market of eager and enthusiastic collectors of all ages, and to airlines themselves. Today, Herpa offers airplanes in sizes ranging

from the smallest 1:1000 scale to 1:500, 1:400, 1:200 and 1:160.

For SriLankan’s 25th anniversary in 2004, Herpa produced an exclusive Airbus 1:1000 model in the carrier’s livery, being distributed on board and for promotion, and now a collector’s item. Still in Herpa’s catalogue is the SriLankan A340-300.

“We started with our most popular 1:500 series in 1992 and have since built more than 1200 different models of this scale alone in the liveries of over 260 airlines”, states chief executive Claus Wagener, who took over the family company from his father. After starting production in 1949 Herpa initially manufactured only accessories for model railways, venturing later into the supply of parts for the photo industry and for model car racetracks. In 1978 the company became better-known for its model cars in H0 scale of 1:87. Only in 1986 Herpa, based in rural Franconia an hour out of Nuremberg in

1 - The Airbus A300-600 is one of the only four types of Herpa’s 1:200 premium series.

2 - The Boeing 747-400 is the biggest model of Herpa’s most exclusive product line.

3 - Fuselages of Boeing 747-400 models are lined up for further treatment at the German factory.

southeastern Germany, started to produce plastic aircraft, initially as expensive premium models in 1:200 and exclusively for sale by the German airline Lufthansa. In 1992, the first 1:500 metal models followed, still restricted to replicating just the German carrier’s airplanes for sale by the airline alone. It was in 1993 that the success story really took off, when Herpa started to produce model aircraft of other airlines. “Today we are manufacturing more than 800,000 models of all sizes every year”, says Claus Wagener, “and the most fanatical collectors seem to be based in the United States and Hong Kong”. In the former British crown colony some enthusiasts have even opened a Herpa café, displaying models from floor to ceiling and offering a panoramic view of the skyline (www.expressofood.com).

The Chinese mega-city is actually very close to the birthplace of most Herpa models – all the metal aircraft are made by a partner company in Shenzhen, just an



hour's jetfoil ride from Hong Kong island. Explains Wagener, "If we would produce the whole range in Germany, they would [probably] cost double". So today only the 1:200 premium aircraft series made of plastic is still manufactured at the company's headquarters in Dietenhofen where most of the 260 employees work on machines that make model cars.

"Different regions seem to prefer different sizes of models – the Japanese only have tight spaces at home, so they like the 1:500 series"; explains Wagener, "whereas in America it can't be big enough". Accordingly, the production numbers vary vastly: whereas every 1:500 series model offered normally sells between 2000 and 60,000 pieces each, the produced number of premium models rarely exceeds 1000.

The premium series, which can sell for more than US\$300 per aircraft, comprises probably the most fantastic model aircraft ever built. Their amazing features

4 - Accuracy to the slightest detail – Herpa's models have a fully moving landing gear.

include turning engine fans, replicas of even the smallest antennas on the fuselage and super-tiny springs inserted in the landing gear to let a Boeing 747 realistically touch down with its back wheels first. A premium series 747-400 is made of 153 individual parts, otherwise unheard of in the model business. "We still use the old dies for production of A300-600, Boeing 727, 737 and 747-400 premium models"; explains Walter Winkler, head of development at Herpa. "Unfortunately we can't afford to come up with new dies of this quality for, say, the Airbus A380 – that would cost up to €700,000 and nobody can afford that today".

5 - SriLankan Airlines 1:500 A340-300 sits behind the 25th Anniversary 1:1000.



It also requires labour time of one man-year to bring a new premium model into being. These days, new aircraft models are conceived entirely by computer. "We are using computer

aided design (CAD) and manufacturing (CAM) since 1990, but now there is a direct connection between digital development and digital manufacturing, giving us even more accuracy in model production", according to Walter Winkler.

All this is done in Germany for every new model, with a crew of 12 engineers responsible for just the development of cars and aircraft. "The effort for us is almost the same as for the manufacturer of the original aircraft – just 200 or 500 times smaller".

The variety of aircraft types that the Herpa catalogue covers is almost a complete ride through aviation history – everything from Boeing's first B & W 'Model 1' biplane of 1916, the legendary Junkers Ju 52, the DC-3 and all Russian and Western commercial types right up to the A380.

Herpa always needs consent from both aircraft manufacturer and the airline to be able to produce



1 - A historic Boeing biplane of 1916 vintage is Herpa's smallest model.

2 - Most design work today is supported by Computer Aided Design (CAD).

3 - A specially-marked Boeing 767 is signed by the movie cast of *Lord of the Rings*.

4 - This Boeing 747 die was originally produced for Lufthansa.



a model. In fact, very often invaluable data ranging from construction drawings to livery details are supplied directly from Airbus, Boeing or the airlines themselves. And while both the sleepy German town of Dietenhofen and the bustling industrial hotbed of Shenzhen in China don't look like centres of world air traffic, nowhere else are more aircraft built, albeit small ones.

an oven for further hardening for about 90 minutes at a temperature of 60°C (140°F). Next, the hardened fuselage parts receive their basic colours, and each piece hand-varnished, followed by any smoothing out of irregularities.

gear is attached to the fuselage. Before the models are boxed for shipping to Dietenhofen, they are thoroughly checked again with attention paid to the slightest detail. "Altogether it takes 30 to 45 days to make a perfect model out of two pieces of zinc alloy," says David Ma, head of production in Shenzhen and boss of some 1200 employees.

A visit to Shenzhen reveals the attention to detail even in the mass production of the 1:500 series which makes Herpa models so unique. For each aircraft type two different blanks are at first diecast from a zinc alloy – one for the aircraft's fuselage, one for the wings. Three machines, working around the clock, produce the blanks alone. After the diecasting process, each blank has to be smoothed and polished, with the fins filed away from the cast by hand. After the blanks get their final polish, they are put into a large cauldron filled with small stones. Water is added to clean the blanks, while a motor keeps them moving around. In the following stage, the fuselage parts are baked in

While the process is labour-intensive, the real hard work begins only now, which at the same time is a trademark for Herpa models – imprinting the fuselages with every small detail. Sometimes colour details only a millimetre wide are applied in a single printing step, for example the navigation lights on the wingtips. One by one, the stamp of the printing machine applies a logo, a stripe or a dot in the exact position. A simple German flag, for example, requires six different printing steps, with three narrow stripes of different colours having to be applied on both sides of the model. When all parts have been imprinted, the fuselage, the wings and the vertical stabilizer are put together by hand before the wings are riveted in position onto the fuselage. In a last step, the separately-produced landing

It is quite natural for Herpa to be regularly confronted with eager collectors' impatience – but the company insists it needs to take sufficient time to create a quality product. Herpa has its own collectors club with more than 3000 members all over the world and issues its own magazine called *Wings World* four times a year. "Our typical collector is male and 20 to 40 years old," says Thomas Borgmann, the club's manager, "and some of them literally put almost all their money into our models."

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