# Southwest Airlines:
## Aerodynamic Winglets for the 737 Fleet

Nature was the inspiration behind the modern winglets: their design was modeled after birds' wings. FACC produces the advanced wing tips for Boeing planes under contract for Aviation Partners Boeing, who are responsible for the developing and marketing of the blended winglets. Southwest Airlines also wants to use the aerodynamic advantages of this new development for their 737 fleet.


**September 27, 2003 was an important day for FACC:** Right on schedule, the first blended winglets for Southwest Airlines' Boeing 737s left the plant. The wing tips were delivered to BF Goodrich Everett, where they will be mounted on the 737s.

During the handing over ceremony of the first winglets for Southwest Airlines Mike Marino, CEO of Aviation Partners Boeing (APB), congratulated the FACC team on their performance: "The team responsible for manufacturing the Blended Winglets has carried out outstanding work and has proved once more that FACC ranks among the most important and most reliable partners for Boeing as suppliers."

Walter Stephan, chairman of the board of FACC, thanked Aviation Partners Boeing for the trust they showed by choosing FACC as a new partner and emphasized the excellent cooperation shown by both partners.

In 2002, Aviation Partners Boeing, a joint venture between Boeing Company and Aviation Partners, contracted FACC to produce the new winglets for all Boeing 737 NGs and Boeing Business Jets. At the 2003 Paris Air Show, Southwest Airlines, one of the most successful US airlines, ordered blended winglets for all of its Boeing 737-700 planes. For FACC, the order means considerable growth in turnover, since it means that Southwest Airlines wants to equip 169 planes with winglet technology within the next 2 years. They also have an option on 373 sets of the winglets, assuring their production at FACC into the year 2012. This order is over and above the already existing order of 120 winglets for other airlines such as Virgin Airways, Westjet, COPA, Futura, AMX, etc.





### Airlines Profit from Modern Winglet Technology

By installing the innovative winglets, Southwest Airlines can expect enormous savings in fuel consumption and high in-flight efficiency. "The savings potential in fuel consumption for a plane equipped with winglets is around 4-5%. In addition the range is extended by about 300 km," Mike Marino says. "Equipping the 737-700 planes with the advanced winglets contributes significantly to a higher performance for Southwest's fleet." And the strategy of one of America's best airlines has paid off. Southwest Airlines has mastered the current crisis in the aviation industry and continues to write its own unparalleled success story. The Dallas-based U.S. airline first took to the skies in 1971 with three Boeing 737s. Meanwhile the fourth-largest American carrier operates 378 airplanes, exclusively from Boeing's 737 family. At present the low-fare airline has 133 Boeing 737-700s and has an option on another 116.

Follow-up orders by other U.S.-airlines that will want to benefit from the aerodynamic advantages as well as the modern exterior can be expected.

### Use of SPMS Enables FACC to Increase Winglet Production on Short Notice

Thanks to its extensive expertise in applying a "Synchronized Production and Management System" (SPMS), FACC was in a position to increase the production rate from three shipsets to the twelve shipsets a month that was necessitated by the Southwest order. The limited amount of resources in tools and facilities on site was overcome by a fixed-cycle operation in manufacturing. This puts us in a position to finish one shipset of winglets per 1.6 workdays while having a drastically shortened production throughput and a low inventory. Parallel to bringing on and training new staff, the organization and the layout of the assembly area was the central challenge.


**Mike Marino, CEO of APB, congratulated the Winglet team from FACC on their outstanding performance.**

The production layout was exactly geared to the pre-defined manufacturing cycle. Investments in partly automated assembly equipment and the organization of the individual worksites follow the principle of differentiation between value adding and support activities and contribute greatly to the economic success of the winglet production.

For the Ried facility it will be the assembly department in particular that will serve as a future measure and benchmark concerning production organization and logistics. While praising the advantages of applying the SPMS technique, Manfred Neuböck, Chief Operating Officer at FACC, points out: "One further essential characteristic of synchronized production is the necessity of the exact and 100% adaptation and subordination of supporting areas such as material supply, logistics, quality control and engineering to the manufacturing cycle. It is the only way for us to observe the supply rate that is demanded by our customer on schedule."