

## A320 FAMILY - STRUCTURAL ASSEMBLY LINE



### Structural Assembly Line for A320 Family Single Aisle

Hamburg, Germany - At the end of 2006, AIRBUS Germany placed an order with MCE to assign an assembly line for the section and structural assembly of A320 family - Single Aisle fuselage center section 15/21 Airbus demands the highest requirements for quality and precision.



For the first time in the aircraft industry, the principle of flow production for the structural assembly was realized. The fuselage section 15/21 is lying on a fuselage carrier, which gives the geometry within a range of 0.2 mm tolerance and moves rail-guided in a daily rhythm from one station to the next on a customized rail system with 50 m length. Several assembling works are done to get the geometry with the highest accuracy requirement. There is a clear benefit to this new way of assembly: reduction of cycle time, no need for consecutive positioning works to reach geometry in the following stations, and no risk of damage by manipulating the A/C part. For this purpose, all geometry-giving devices of the respective stations will be docked at the fuselage carriers.

The Flowline 15/21 consists of six fuselage carriers with a dimension of approx. 9 x 5 m and approx. 16 t of weight (without Aircraft-parts). Most modern laser tracker technology in the highest precisions is applied to measure each fuselage carrier in each station.

The very high demands regarding quality and technical standards which had to be implemented in this short period have placed the highest requirements at engineering, manufacturing, assembly, measuring, and project management. The best-trained team fulfilled the high requirements so the user tests in April 2008 could start in time.

#### ***Facts & Figures:***

<b>Working area:</b>	1,900 m <sup>2</sup>
<b>Customer:</b>	AIRBUS Deutschland GmbH
<b>Steel construction:</b>	130 t
<b>Project period:</b>	2007 - 2008
<b>Dimension fuselage-carrier:</b>	9 x 5 m
<b>Length of the conveying system:</b>	approx. 50 m
<b>Self-weight fuselage-carrier:</b>	6 x 16 t
<b>Tolerance requirements for parts:</b>	±0.2 mm