

Flying high - Zünd cutters involved in the construction of civilian and military air and spacecraft.



Kurt Odermatt

### Ruag Technologie

Ruag Technology is a global supplier and integrator of components for aerospace applications. The company's production facility manufactures parts from composite materials (carbon, fiberglass, aramid) and aluminum. Two Zünd cutting systems are used for processing both dry and prepreg materials and are also equipped for cutting aluminum and paper honeycomb. Significant value is created in house, from cutting to assembling and finishing. The entire production process requires a range of machinery that, besides the flatbed cutting systems, involves a 5-axis router, autoclave, and electroplating equipment. The Zünd cutters are used for digitally cutting mostly short runs with very stringent quality requirements. With its focus on civil and military aviation, Ruag Technology's worldwide customer list

includes such well-known names as Airbus, Boeing, Northrop, GE, Bombardier, Dassault, Pilatus, and many others.

### Reliable, tight-tolerance cutting of wide range of parts

Originally, the company purchased Zünd digital cutters to replace an older cutting machine. Because of the Zünd cutters' increased capabilities, it became possible for Ruag to cut and mark parts with superior accuracy, reproducibility, and efficiency. „The Zünd cutters are exceedingly reliable, run with few interruptions, and generate minimal waste, which is absolutely critical considering our high material costs (20-220 CHF/m<sup>2</sup>). Because of the greater flexibility we have with Zünd, we can also process a wider range of parts than we could before“, says Anton Rohrer, responsible for production planning.

### Noticeable increase in productivity and competitiveness

Compared to the cutting equipment the company was using previously, the hourly

rate for digital cutting can now be set considerably lower. Maintenance has also gone down significantly. The increase in performance and reliability has led to a noticeable boost in productivity; to some extent, this is due to the conveyor extension that allows for removing cut parts while the machine continues cutting. „The end result of all this has been that, thanks to the technology from Zünd, we have become noticeably more competitive“ concludes Kurt Odermatt, Team Leader Composites.

### Future outlook

„By adding a second Zünd cutter at the beginning of 2010, we set the stage for future growth. Because of this, and the great relationship we have established with Zünd, we calmly look toward to any challenges the future may bring“.

[www.ruag.com](http://www.ruag.com)



Cutting of carbon prepreg in the clean room.



Peter Burach, Kurt Odermatt, Anton Rohrer (from left to right)

Factbox		
Material	Properties	Applications
Carbon fiber reinforced polymer/plastic (CRP/CFRP/CFK)	Good electrical and thermal conductivity, lighter and more expensive than GRP.	Lightweight construction in aerospace, automotive, racing, sports equipment applications, etc.
Glass fiber-reinforced polymer/plastic (GRP/GFRP/GFK)	More cost-effective than CRP, electrically non-conductive, good corrosive resistance.	Shipbuilding; manufacture of tanks, containers, pipelines; wind power, helmets, etc.
Aramid fiber-reinforced polymer/plastic (ARP/AFRP/AFK)	Tough material with high tensile strength, impact and fracture resistance, chemical and heat resistance.	Shatter protection, bulletproof vests, protective gear, armor plating, etc.

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