



# Aerospace Finishing



## AEROSPACE FINISHING - THE CHALLENGES

Given the large size of most aircraft, using traditional paint booths is not an option. As a result, different measures must be used to capture or reduce paint overspray and bounce-back. The DUX spray guns excel in this area, providing superior transfer efficiencies due to reduced operating pressures and lower air volumes. In addition, the DUX guns provide superior performance when very low mil builds are required. In an effort to reduce aircraft weight, many aerospace manufacturers and parts suppliers specify coating thicknesses of 1.0 mil or less. Traditional HVLP guns often cannot atomize materials properly at low fluid flow rates and require the use of fluid tips sized at 1.0 mm or higher. The DUX gun operates flawlessly with fluid tip sizes down to 0.6 mm and can consistently apply an even coating of 0.5 mil or less.

Finally, with the move to water-based, non-chromate primers, it is essential for spray equipment to adequately atomize and apply these difficult coatings. Most high volume air spray equipment has a tendency to trap excess air between the target surface and the coating during application. As the air works its way out of the paint, severe defects such as orange peeling or sagging can occur, forcing costly reworking of the surface. The DUX technology prevents these finishing defects while simultaneously cutting down on overall material costs. As always, the superior performance and overall benefits resulting from using DUX guns is not only evident in objective data, but also by actual users of the gun.

## THE DUX TECHNOLOGY

Efficient air transfer is the key to the Dux Technology. Conventional spray guns of both standard and HVLP types suffer from a considerable reduction of air pressure through their guns. Losses of greater than 80% are not uncommon. The HVLP gun has a very large clearance between the air cap and fluid tip. These guns require very large volumes of air to maintain an acceptable atomization. The result is atomized paint that is blown in all directions due to the expansion of air. The HVLP type of spray gun is limited by a lack of internal airflow efficiency.

The Dux airflow pattern and efficiency are patent-protected and, along with the air cap, are key to the performance of the Dux gun. Dux achieves an optimal 90% spray efficiency during the air and fluid movement through its gun.

## REGULATORY AND ENVIRONMENTAL ISSUES

Looking at the big picture of the coating industry, regulators, health and safety managers, and environmentalists have two overriding concerns. The first issue is the level of Volatile Organic Compounds (VOCs) that are released into the workplace. This is due to the composition or ingredients of the coating materials used throughout the industry. The second key issue is the level of VOCs that are released because of the low transfer efficiency of the spray guns used to apply the coatings. From an environmental and health and safety perspective, Dux solves this second issue. The Dux Technology has achieved a transfer efficiency rating greater than 90% at less than 10psi. Lower pressure means less overspray. Better design means: higher transfer efficiency; less wasted material; and a reduction of VOC's. That's a win for any operator.

### • IMMEDIATE ROI

- Reduced coating usage
- Decreased cleanup costs
- Faster production speed
- Energy savings

### • EASY TO USE

- Ergonomic design
- Lightweight and balanced
- Reduced booth fog and overspray

### • AIR QUALITY & SAFETY COMPLIANCE

- Drastic reductions in VOC emissions
- Reduced HazMat clean-up and disposal
- AQMD compliant by definition
- Fully CE marked & ATEX approved

### • ADVANCED TECHNOLOGY

- Laminar airflow
- Low pressure with high velocity
- Exceptional atomization
- Outstanding utility across coatings and applications