



Military Finishing



MILITARY FINISHING - THE CHALLENGES

Defense vehicles and aircraft are not only painted to provide advanced camouflage protection, they must also be coated with materials that are easily de-contaminated if chemical or biological weapons are encountered. Chemical Agent Resistant Coatings, or CARC, are some of the most highly engineered combat coatings ever created. There are several forms of CARC, but all contain high levels of metallic pigment agents and silica, used as a flattening agent. This results in an extremely thick, heavy, and abrasive material that cannot be adequately sprayed with many spray gun technologies. Fortunately, the DUX gun loves a challenge! The DUX gun has repeatedly sprayed CARC and other viscous and abrasive defense coatings with outstanding results. Given the highly toxic nature of liquid CARC, defense users of the DUX gun have also been extremely pleased with the lack of booth fog and the reduction in hazardous waste disposal.

Finally, in the last two decades many defense coating operations have switched to electrostatic coating in an effort to improve transfer efficiencies. Unfortunately, these systems require a high level of training and can be very dangerous when safe-guards are not followed. More importantly, though, the move to composite materials in stealth aircraft, equipment and infantry vehicles has made electrostatic coating obsolete. Only the DUX technology can achieve the same, and in most cases better transfer efficiency while coating these new non-conducting materials.

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