

AEROSPACE & DEFENSE

World Class Paint Environments for your Ultimate Finish





GLOBAL FINISHING SOLUTIONS

QUALITY FINISHING EQUIPMENT

With over 130 years of history, Global Finishing Solutions' (GFS) beginnings date back much further than any other manufacturer of spray booth environments. GFS' success comes from the amalgamation of North America's most significant finishing equipment manufacturers, including Binks, Devilbiss and JBI.





MADE IN WISCONSIN, USA

All of GFS' products are fully designed and manufactured in our Osseo, Wisconsin facility. With more than 200,000 square feet of manufacturing space and state-of-the-art equipment, GFS has the capacity and talent to build our booths from scratch. Not an assembler, virtually every part of our product line is fabricated in shop, including the enclosures, structure, control panels, lights and hinges.











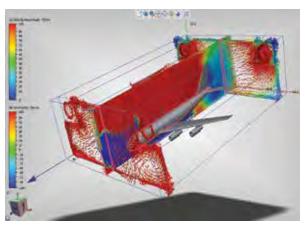
SUPERIOR ENGINEERING & DESIGN

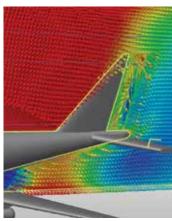
GFS has unsurpassed technical knowledge and engineering expertise. Our in-house design and engineering team consists of mechanical engineers, electrical engineers, software developers, licensed structural engineers, airflow specialists, code compliance specialists and systems designers. This experienced team provides pre-contract, mechanical, electrical, AutoCAD, PLC and programming functions on custom and standard equipment orders.



ADVANCED TECHNOLOGY

GFS has acquired Computational Fluid Flow Dynamics (CFD) software. This advanced software allows us to simulate booth airflow performance. By modeling the various elements of the booth, we can provide customers with a preview of how well the booth will perform. This technology is especially beneficial for large, custom projects, as it allows us to test out engineering designs before the booth is built, saving time and money, and improving the overall booth performance.





Owned by the Curran Group, GFS derives additional strength from Curran Group's financial stability and impressive resources. GFS has the financial capability to take on large projects, such as complex systems integration projects and massive aircraft spray booths. Through the strength of the Curran Group, GFS has low bond rates and, a high single and aggregate project limit, providing us with the ability to take on several large projects simultaneously.



PE LICENSURE & STAMPS

Several of GFS' engineers have pursued PE licensure, the engineering profession's highest standard of competence. As licensed professional engineers, they can prepare, sign and seal engineering drawings. Our professional engineers have

the resources to provide stamped drawings in all 50 U.S. states and Canada.



CODE COMPLIANCE

A crucial part of the purchasing and installation process of a spray booth is ensuring that your installation meets all of the safety and legal requirements that apply to your city, state and country. GFS makes sure that our products meet and/or exceed all the applicable codes related to the equipment.







GFS staff regularly follows and contributes to the advancement of codes and standards that affect the industries that we work in. Currently, one of our engineers serves on the NFPA Technical Committee on Finishing Processes, a key standard in the finishing industry.



SALES CONSULTANTS

The first person you will work with at GFS is an Aviation Sales Professional.

We will work with you to find the best solution to fit your unique needs, taking into account your existing or new building structure and coating requirements.

ENGINEERING & DESIGN

The majority of our business is done through custom projects. In the aviation and government industries, this is especially true. Our on-staff engineers and drafters will design a product specific to your needs and requirements.





PROJECT MANAGEMENT

GFS will assign a dedicated project manager to follow your project through from start to finish, keeping the project on budget and on time. The project manager will become your primary contact once the order is signed and contracts are executed.

This person is responsible for developing the project schedule and monitoring the budget, equipment quality and project billings.

INSTALLATION & STARTUP

When it comes time for installing your equipment, our expert installers will make sure that your booth is constructed in a timely fashion and according to the proper specs and regulations.

Our experienced staff has completed installations of some of the most advanced finishing environments in the world. Once the booth is built, our startup technicians will get your booth up and running, so that the painting can begin!





SERVICE & MAINTENANCE

We have many options for service and maintenance to ensure that all GFS products operate at peak efficiency. Services include filter changing, booth cleaning, replacing components, control panel programming and end user training.

GFS also provides ongoing customer and technical support for our customers on all manufactured products.

PARTS & FILTERS

GFS offers replacement parts and air filters for all of our finishing products, as well as other brands. Dedicated to product quality and performance, our parts and filters are designed to keep your finishing equipment running. Great emphasis is placed on our engineering and workmanship so that our customers receive the best products at competitive prices.



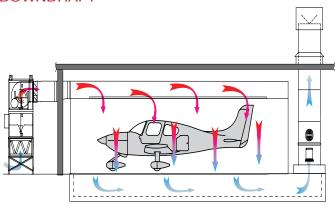
STATE-OF-THE-ART PAINT BOOTHS

Aviation coatings require precise environmental control over temperature and humidity in order to cure properly and prevent contamination, which is a vital factor in the aviation finishing process. GFS ensures its aviation finishing equipment meets and exceeds the highest standards in the world.

AIRFLOW

The primary aircraft booth styles are crossdraft and downdraft. Air flows through each booth differently, and each style has its own advantages.

DOWNDRAFT



Generally regarded as the preferred airflow style, downdraft aircraft paint booths are a sign of a truly world class finish. There's an advantage of allowing gravity to pull the overspray to a pit in the floor. Lighting and airflow is exceptional in a downdraft booth.

Downdraft aircraft booths can be designed for a specific plane to optimize the airflow design and overall efficiency of the system. This is especially true when using a booth for similar size and shaped aircraft. For the most economical design, a downdraft booth should be incorporated early into your facility's design process.



STRUCTURE

Aircraft paint booths can be constructed two different ways — within an existing hanger or as an integrated part of new building construction.

HANGER/INSERT



If hanger space is available, Aircraft Paint Booth Inserts may be the perfect solution for your finishing operations. Paint booth inserts are placed inside the hanger and are completely self-supporting, requiring only that the user bring in utilities and connect to the insert. GFS' aircraft paint booth inserts are typically purpose built for the kind of aircraft to be painted.

HYBRID/INTEGRATED

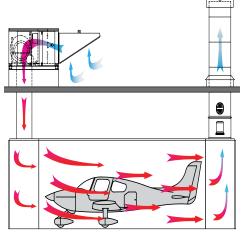


In some instances, such as new building construction, it is better to integrate the paint booth with the building elements. With a Hybrid Aircraft Paint Booth, the structure of the hanger holds up the booth ceiling and the building sidewalls can be integrated into the booth design to economize on material. GFS will work with the building architect(s) to integrate our paint booth design goals with the building design goals.

CROSSDRAFT



Air in a crossdraft booth flows from end to end, matching the natural flow of air across the aircraft. This provides excellent quality finishes. Making up about 75% of all aircraft paint booths, crossdraft booths are the most common style for aviation finishing operations.





ENERGY EFFICIENCY

Understanding the importance of energy efficiency, GFS has identified several ways to conserve energy with your finishing equipment. From design changes, to energy-efficient lighting, to heat recovery systems, GFS will work with you to develop the best solution for your business.

CONFORMAL SHAPE/DESIGN

GFS has pioneered the use of conformal paint booths. With this design, air is introduced at a higher velocity in the spraying zone than in the non-spraying areas of the paint booth. This provides excellent painting performance, while minimizing the amount of air and energy required for the process. In some cases, these designs can result in a savings of 15-30% in capital and operating costs when compared to that of a traditional booth design.

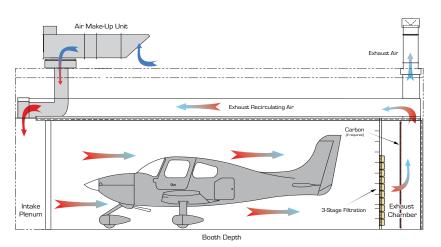
LIGHTING



Modern technology has given way to improved lighting at reduced power. GFS engineers will help you develop a lighting layout in your booth that optimizes the lighting levels, as well as the number of fixtures and their location in the booth. To support the design process, GFS will also provide lighting calculations, which will show a graphic representation of the lighting levels you can expect in the booth.

RECIRCULATION

Recirculation is an effective method of reducing not only operating costs of the paint booth, but also equipment costs. Taking into account the specific booth climate requirements of your process, GFS can provide a recirculated air system for your booth that will provide accurate control of the booth climate and airflow, while providing the most efficient operating system possible.



HEAT/ENERGY RECOVERY



As air is exhausted from process equipment, heat is lost as well. Heat recovery systems are the answer to reclaiming some of the heat that escapes with the exhausted air, in turn providing measurable energy savings. On average, energy recovery systems provide 40-50% energy savings for air make-up systems serving the booth for both heating and cooling.

TEMPERATURE & HUMIDITY CONTROL



Aircraft paints can be very demanding of the application conditions. Modern paints are best applied in a narrow temperature range. To help maintain the required temperature and humidity in the paint booth, temperature and humidity controls can be designed into the air replacement systems. GFS is a leader at designing the most modern environments with specialized equipment and controls.

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PROJECT PROFILE -







A crossdraft paint booth was ordered, and included a multi-mode control system to operate in paint and cure modes with temperature and humidity control. The booth was designed with conformal design, meaning the shape of the booth closely conforms to the shape of the aircraft. This method reduces total airflow in the booth, thus reducing energy use. The booth was designed to achieve high quality finish standards while protecting the environment and the operators.

The design for the paint booth was for a 115-foot-wide, 28-foot-high and 115-foot-long room. Exhaust is recirculated in the curing mode (120°F temperature) to reduce energy costs. This booth has five indirect fired air replacement units with direct steam injection for humidity control. The booth is equipped with 3-stage NESHAP filtration. Lighting in the booth is exceptional and rates over 100 fc in most places.

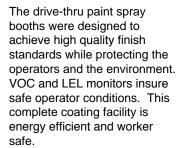


This company designs, builds and supports a reliable and proven performance rotary wing aircraft for the private, commercial and military sectors.

Their new facility was built to support the U.S. Army's UH-145 Light Utility Helicopter Program, three new paint spray booths were required for the stringent coating requirements. Down draft paint spray booths were selected with full grated floors.



The booth incorporates re-circulation technology and uses filters complying with EPA NESHAP filtration requirements. Filters are located in the basement of the booths via a below-grate stairway.



Temperature and humidity controlled air enters the paint spray booths through filters located in the ceiling. Exhaust air is pulled out through a full grated floor system that covers the entire width and length of the booth. Paint spray booths are complete with an integrated cure cycle for high production.





PROJECT PROFILE





This paint booth project was for a full-service paint facility located in Moline, Illinois. They were installing a state-of-the-art completions center. In addition to a paint booth and a preparation bay for two planes, this center included an interior shop for completion and refurbishment of leather, metal and wood interiors.

The 75-foot-wide, 28-foot-high and 75-foot-long paint booth is air-conditioned and humidity controlled. In order to conserve energy, they chose a 60%/40% recirculation air handling system. The refrigeration system features a chilled water system with pumps and storage tank.

The paint booth has a 3-stage NESHAP (EPA method 319) filtration system. The first stage is installed in the trenches under the grating, while the other two stages are located in filter chambers at each side of the booth. The underfloor filtration is mounted on a carriage that allows replacement of filters from one end of each trench. This elimilated the need to raise all of the floor grates to replace filters. The entire floor space is also pressure controlled; fans speed up as filters load up with paint overspray dust.

The ceiling system encloses a plenum space above the ceiling where the fresh air and recirculation air are mixed. The filters are high diffusion tacky intake filters, and serve as a method of maintaining clean air in the painter's environment. Walls and ceilings are very smooth and easily cleaned.





Located near Salt Lake City, UT, this facility is responsible for heavy maintenance of aircraft. A fast-track project starting in August 2007, engineering began almost immediately, followed promptly by the manufacture of sheet metal and structural components. By August 2009, installation of the first three booths was complete.



The booths are 75 feet wide, 28 feet high and 92 feet long, and feature state-of-the-art 3-stage NESHAP filters in a single filter wall at the rear of the booth. The booth uses 100% outside air, and includes an energy recovery cell that reclaims 55% of the energy from the exhaust. Swinging plenum filter doors allow for entry of fresh, clean air.





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