

Excerpts from one spraybooth manufacturer- Blowtherm:

With the latest European Regulations which enforced the use of water base paints and also the European Directive (EN13355) relating to painting and drying booths, a demand emerged for the introduction of the new Blowpower system in the Extra spray booth. The system optimizes the spray booth performance in terms of energy saving, reduction in atmospheric pollution, operational speed and the quality of the finished work. The selection of the most advanced technologies optimizes the performance of the spray booth, offers substantial energy savings and provides exceptional results.

The Product covered by this report is a fully automated spray booth with a forced air filtration system and a paint cure cycle. It is erected on site and permanently connected to the supply sources. A Direct Gas Fired Industrial Air Heater or a Gas or Oil Fired Indirect Heating Forced Air System. The heat and air exchange source is permanently connected by ducts and damper assembly. The Spray mode is set for maximum 90°F, the cure or Bake mode is set for maximum 190°F. During bake or cure mode the air system reduces exhaust, increases recirculation by 70 %, air removal is reduced to 30 % of total capacity. The Automotive Paint Spray Booth is certified for connection to a varied heating input.

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There are Five Critical Reasons to use a Spray Booth:

- 1. Confine the application of hazardous material to a restricted area.**
- 2. Prevent hazardous overspray and volatiles from escaping confined areas.**
- 3. Control air fuel/mixture so that a combustible combinations cannot occur.**
- 4. Provide a clean environment in which to paint.**
- 5. Use environmentally friendly water-based paints instead of volatile solvent-based paints**

Paint Spray Booths

Types

Spray painting should always be done in a well-ventilated **spray booth** - defined as a separate room with a ventilation system.

Manufactured spray booths can be purchased and installed, or booths can be custom made. Either type works well to protect workers and produce good painting jobs. The type of ventilation makes the most difference in how well the booth works.

Priming in a prep station protects other workers and the paint job.

Priming is usually done by autobody technicians rather than painters and is often done on the shop floor. This practice can cause significant exposures to other technicians in the area!

Many shops have invested in prep stations for both sanding and priming. **Prep stations** are portable spray booths with ventilation and filtration of the exhaust air.

Downdraft

Spraying of sealer, basecoat, and clearcoat is almost always done in a spray booth to protect both the workers and the paint job. The most effective paint booths are downdraft booths which supply filtered air to the booth through its ceiling, and exhaust the chemical-containing air to the outside after it passes through filters below the grating on the floor. In these booths the air is directed downward, and the paint vapors and overspray are carried downward. So, they do not even pass by the painter's breathing zone.

Semi-Downdraft

Semi-downdraft booths, in which the air either comes in through ceiling filters and goes out at the back of the booth, or comes in through the door and exhausts through the floor, can also be effective. In these booths the position of the painter is crucial. Whenever possible the painter should orient himself so that he is upstream from the paint being sprayed, aiming the paint gun in the direction of the exhaust and away from himself (and toward the car, of course).

Cross-Draft

Orientation is important for cross draft booths as well. These booths draw air in from the rest of the shop through the filters on the door and exhaust the air through filters at the back of the booth. The painter should again be as far as possible upstream of the surface he is painting.

Why should you use a booth?

To prevent breathing of solvents, coating aerosols, and particularly isocyanates, the spraying of primer, sealer, basecoat, and clearcoat should always be done in a spray booth by a worker wearing respiratory protection. The booth isolates the more hazardous spraying operations from the less hazardous work being done nearby in the shop. A spray booth supplies clean filtered air to the worker in the booth.