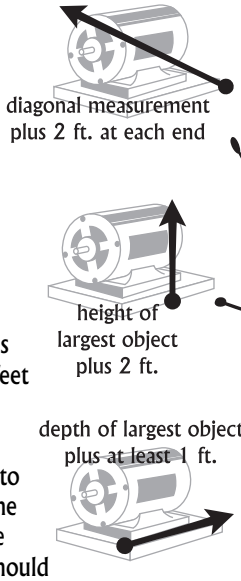
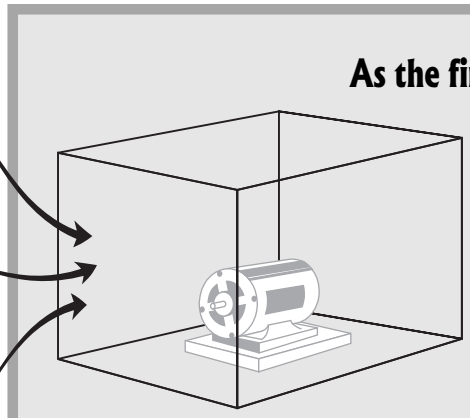
FUNDAMENTALS FOR PROCLEAN™ STYLE EQUIPMENT

Best quality lighting air flow value

Choosing the Right Equipment





As the finisher needs ample room in which to work, the size of a spray booth is critical to the successful performance of the finishers and the spray finishing equipment.

Width

• Measure the diagonal dimension of the largest article, including fixture or pallet, and add two feet minimum clearance on each end.

• In multiple-operator booths allow a minimum of 6 to 8 feet for each finisher.

• In conveyorized processes the width must be sufficient to allow finishers to complete the finishing operation within the allotted time, and spraying should not be closer than two feet from the conveyor opening.

Height

• The height of the booth is determined by the overall height of the largest item plus the height of its holding fixture — plus two feet clearance.

• Ample room should be allowed for the finisher to spray the top and bottom of the object.

Depth

• Working depth should be sufficient for the object to be within the enclosure — plus one foot clearance at the rear (from the filters).

• The finisher should work within front line of booth, except on bench or leg type booths.

Lights

Proper uniformity and intensity of lighting is necessary to produce good working conditions. Final selection of your lighting should be based on your finishing operation. The standard lighting in all TBI spray booths is excellent for general operations. For situations requiring the illumination of vertical surfaces, it may be beneficial to add supplementary lighting.

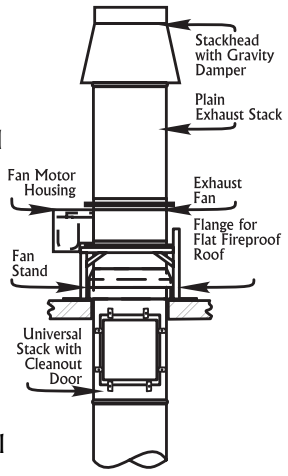
Your spray booth is an investment that pays many dividends by providing a cleaner painting environment for a better quality finish, a means of increasing productivity, and a superior working environment for your finisher.

Product Handling Methods

If conveyors are to be used requiring openings in side walls, order the proper size booth to accommodate these openings. Models are available "with provision for conveyor opening". These booths have the extra depth and exhaust capacity to allow for the openings and are adaptable to most types of conveyors.

Exhaust Stack

Exhaust stacks are required to ventilate the booth to the outside. Stacks should be the same size and diameter as the fan. The stack should discharge vertically for adequate exhaust air flow and TBI recommends that it extend a minimum of 6' above the roofline or as required by local codes.



Typical Configuration of Exhaust Stack Through The Roof With Exhaust Fan Outside Installation

TBI INDUSTRIAL SPRAY BOOTHS
A TEAM BLOWTHERM COMPANY

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PRINTED IN U.S.A.
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Reorder Number
PCL/FND-CTRE/01

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Air Velocity

The air velocity or ventilation rate must be sufficient to insure that the solid particles and flammable vapors are confined to the inside of the spray booth. The configuration of the object being sprayed plays an important role in determining velocity requirements.

For example:

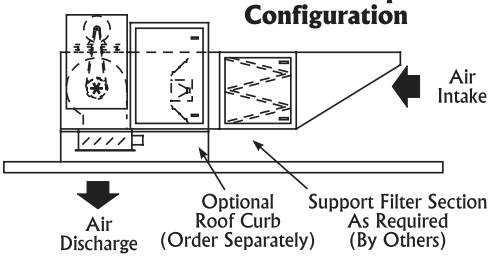
- Manually finishing the interior of file cabinets at higher air velocities would be required to insure that the overspray is removed from the area between the finisher and the cabinet interior. This "capture" velocity can often be as high as 150 FPM with a conveyorized production system.
- Another example could be the finishing of large flat sheets. A high velocity spray booth would be necessary to insure that the air movement around the edges of the large sheets would be adequate to prevent the overspray from rebounding and escaping from the inside of the booth.
- But the finishing of small objects with a lot of open spaces will allow the overspray to be captured with velocities of 125 FPM or sometimes less.
- Manual electrostatic spray guns, which are used to coat objects with open areas and objects that do not block the air flow, will allow overspray to be captured at velocities as low as 100 FPM.

What is to be painted in the booth determines everything about the booth.

Air Replacement

In order to ensure proper air balance, TBI air replacement systems are designed to deliver fresh, filtered and heated air into a building or booth.

Typical Air Make-Up Configuration



To determine your air replacement needs:

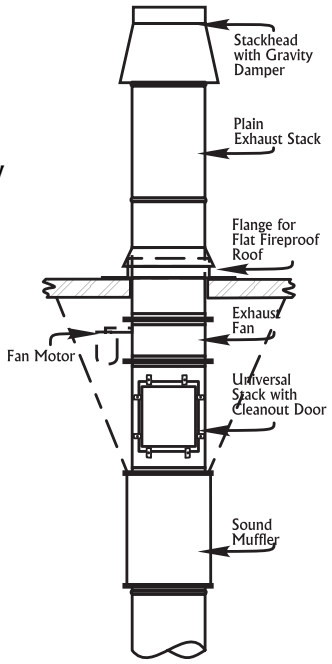
- Multiply the exhaust fan rated capacity (CFM) by 20 (based on three changes per hour: 60 min. / 3 = 20)

The calculation using a 10' wide x 8' high spray booth rated at 125 FPM (with total CFM exhausted 10,000) would be 20 times 10,000 or 200,000 cubic feet of air.

- If your shop area (width x length x height) is less than this amount, you should install an air replacement system.

Sound Level Management

Unmanaged sound in the booth area can reach 90 dBs or more. The very velocity of air creates sound that can reach or exceed safe levels. Sound management technology provides a way of reducing noise levels, thereby improving the safety and quality of the working environment. TBI's muffler installed below the exhaust fan, can reduce the noise level by 2-5 dB in most situations, thereby creating a managed sound environment.



Typical Configuration Through The Roof With Exhaust Fan and Muffler Inside Installation

Code Requirements

As fire, electrical and building codes vary from one area to another, you should consult local inspection authorities before purchasing a spray booth. They often can help determine what equipment is necessary to meet the local codes. They can also provide guidance on electrical work, fire protection systems, and the location of the spray booth in the finishing area and in relation to property lines.

TBI spray booths are designed to help you comply with the requirements of:

- National Fire Protection Association (NFPA-33)
- Occupational Safety and Health Act (OSHA)
- BOCA National Fire Prevention Code; National Building Code
- UFC Uniform Fire Code
- OBC Uniform Building Code
- SBCCI Standard Fire Prevention Code; Standard Building Code

Use of the booth requires a regular schedule of filter replacement. Codes require that filters be inspected after each period of use and that clogged filters be discarded and replaced immediately.

As we are continually trying to improve our products, specifications are subject to change without notice.

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