



1. Split baffle or filters  
 $B = 0.75 D$   
 Baffle area =  $0.75 WH$   
 For filter area, see note 2

2. Angular baffle  
 $E = D + 6"$   
 Baffle area =  $0.40 WH$   
 For filter area, see note 2

#### Air spray paint design data.

Any combination of duct connections and baffles may be used. Large, deep booths do not require baffles. Consult manufacturers for water-curtain designs. Use explosion proof fixtures and a non-sparking fan. Electrostatic spray booth requires automatic high-voltage disconnects for conveyor failure, fan failure or grounding.

#### Walk-in booth

$W = \text{work size} + 6'$   
 $H = \text{work size} + 3'$  (minimum =  $7'$ )  
 $C = \text{work size} + 6'$   
 $Q = 100 \text{ cfm/ft}^2$  booth cross section  
 May be  $75 \text{ cfm/ft}^2$  for very large, deep booth. Operator may require a NIOSH certified respirator.  
 $h_e = 1.78 VP_s + 0.50 VP_d$  (baffles)  
 $h_e = \text{Dirty filter resistance} + 0.50 VP_d$  (filters)  
 Duct velocity =  $2000 \text{ fpm}$

#### Operator outside booth

$W = \text{work size} + 2'$   
 $H = \text{work size} + 2'$   
 $C = 0.75 \times \text{larger front dimension}$   
 $Q = 100 - 150 \text{ cfm/ft}^2$  of open area, including conveyor openings.

#### Airless electrostatic and HVLP spray paint design

$Q = 60 \text{ cfm/ft}^2$  booth cross section, walk-in booth  
 $Q = 60 - 100 \text{ cfm/ft}^2$  of total open area, operator outside of booth

Notes : 1. Baffle arrangements shown are for air distribution only.  
 2. Paint arresting filters usually selected for  $100 - 500 \text{ fpm}$ , consult manufacturer for specific details.  
 3. For construction and safety, consult NFPA - See Reference 10.75.1.



TITLE

LARGE PAINT BOOTH

FIGURE

VS-75-01

DATE

1-91