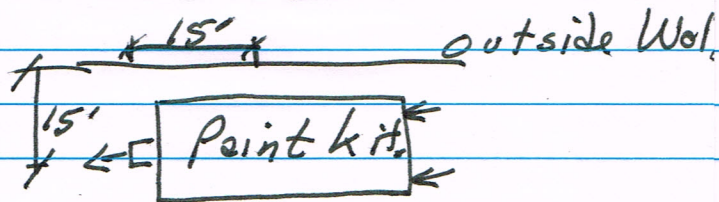


Damper 10"x14" @ 2000 fpm

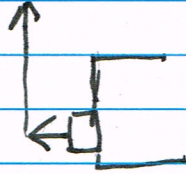
4 - 90° turns

12" = 25' turn

therefore 4-90° Elbows = 100'



Rise  
28'



Total 12"  $\phi$  duct length

(15+15+28)' + 100' (4-90° Elbows)

158' Total Length 12"  $\phi$  duct

Friction Loss / 100ft = 0.10 for 700cfm

158' = 1.58% of 200'

1.58 x 0.10 in WG = 0.158 in WG

Total Static Pressure = 0.25 + 0.158

= 0.408 in WG

$$P = \left( \frac{V}{4005} \right)^2$$

$$P = \left( \frac{850 \text{ fpm}}{4005} \right)^2 = 0.04504 \text{ fpm}^2$$

$$P = \left( \frac{850/60 \text{ fps}}{4005} \right)^2 = 1.2512 \times 10^{-5} \text{ (fps)}^2$$

IMC 2012

510.8 Hazardous Exhaust System

Table 510.8

Minimum duct thickness

12"  $\phi$  duct 0.034 inch  
(22 gauge)



510.8

shall be constructed of  
approve G 90 galvanized Sheet  
Steel with a thickness of

12" 680 CFM @ 3/8 sp fan  
& 1/4 HP

12"  $\phi$  680 cfm  
850 fpm

Typically a exhaust  
fan runs @ 0.25 in WG

510