



Source Capture Extraction  
Systems: Suggestions/Tips  
Selection, Calculation  
Series: 15000

## **TECHNICAL INFORMATION**

In the interest of continuing product improvement,  
we reserve the right to change models,  
specifications, and/or features without prejudice.

PROJECT: \_\_\_\_\_  
 LOCATION: \_\_\_\_\_  
 ARCHITECT: \_\_\_\_\_  
 ENGINEER: \_\_\_\_\_  
 CONTRACTOR: \_\_\_\_\_  
 DATE: \_\_\_\_\_ SALES ENGINEER: \_\_\_\_\_

[www.monoxivent.com](http://www.monoxivent.com)

[info@monoxivent.com](mailto:info@monoxivent.com)

309-794-1000

Page: WSC-2

### **SUGGESTIONS ONLY** **PRODUCT SELECTION AND SIZING**

- A. Based upon the application, determine the style arm most suited to give maximum coverage. Source capture arms are available in 6" and 8" diameters with a choice of multiple lengths.
- B. Select the CFM requirements for the application. The most widely used CFM rating for 6" diameter arms is 600 CFM and for 8" diameter arms is 800-1000 CFM.
- C. Once the CFM has been determined, please consult the graphs (within this catalog) for the static pressure calculations based upon the arm diameter and length that has been selected.
- D. A suggested formula for central duct static pressure loss can be based on the following information:  
 First, calculate the length of the main duct from the fan to the duct end and multiply the length by 0.006. This yields the approximate loss in the main duct.  
 Second, calculate the amount of bends or elbows in the main duct and multiply this figure by 0.020. Next, add the loss for one arm, main, and elbows. This yields a close estimation for total static loss in the system.
- E. Fan selection should be based upon the above information gathered. Fan CFM should be calculated by multiplying the total arms needed by the CFM selected for each arm. (6 Arms x 600 CFM Each = 3600 CFM)
- F. To assist in sizing the main duct, the following table may be used. When sizing, begin with the drop furthest from the fan.

0-400 CFM	6" Main	2351-3530 CFM	14" Main
401-825 CFM	8" Main	3531-4700 CFM	16" Main
826-1470 CFM	10" Main	4701-5900 CFM	18" Main
1471-2350 CFM	12" Main	5901-6600 CFM	20" Main

Connecting duct from the 6" arm to the main duct is 6", while connecting duct from the 8" arm to the main is 8".  
Whenever possible, use a sweeping fitting from the connecting duct to the main duct.

NOTE: The above information should be used as guidelines only.