



Overhead Exhaust Systems
 Suggestions & Tips
 Selection & Calculation

**TECHNICAL
 INFORMATION**

PROJECT: _____
 LOCATION: _____
 ARCHITECT: _____
 ENGINEER: _____
 SALES ENGINEER: _____
 DATE: _____

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SUGGESTIONS ONLY
PRODUCT SIZING AND SELECTION

- A. Determine vehicle type and exhaust pipe discharge locations. {under-chassis or vertical stack}
- B. Select proper hose diameter for the vehicle determined. Suggest using 4" hose for autos, vans and small trucks. Suggest using 5" and 6" hose for larger vehicles.
- C. Select CFM requirements for the type of vehicles determined: Suggest using 200 - 300 CFM for autos, vans & small trucks. Suggest using 500 - 600 CFM for larger vehicles. NOTE - Many facilities do not always run the vehicles at idle. The above listed CFM will Allow for a 20 % increase in RPM with adequate air volume if based on the high CFM listed. Please consult the factory if higher RPM will be used by the customer.
- D. Once the CFM has been determined, please consult the graph in the catalog for the static pressure calculations based on the hose diameter, hose length and CFM required. The graph will give you the static pressure loss for the exhaust removal drop.
- E. A suggested formula for central duct static pressure loss can be based upon the following information: Calculate the length of the main duct from the fan to the end of the duct and multiply the length by .006. This calculation gives the approximate loss in the main duct. Calculate the number of bends in the main duct and multiply this by .020. Add the drop loss, main loss, and the bend loss and you will have an estimate on the system static pressure loss.
- F. Select the fan based upon the total amount of drops times the CFM per drop. Check the fan graph for the fan to give you the CFM you require at the given static pressure that you have calculated.
- G. To assist in sizing the main duct, the following may be used. Begin with the furthest drop from the fan.

0-450	CFM	6"	2301-3500	CFM	14"
451-800	CFM	8"	3501-4700	CFM	16"
801-1500	CFM	10"	4701-5900	CFM	18"
1501-2300	CFM	12"	5901-6600	CFM	20"

* Connecting duct from reel is 6". Whenever possible, it is recommended to use an air flow sweep when connecting the 6" duct from the reel to the main duct.