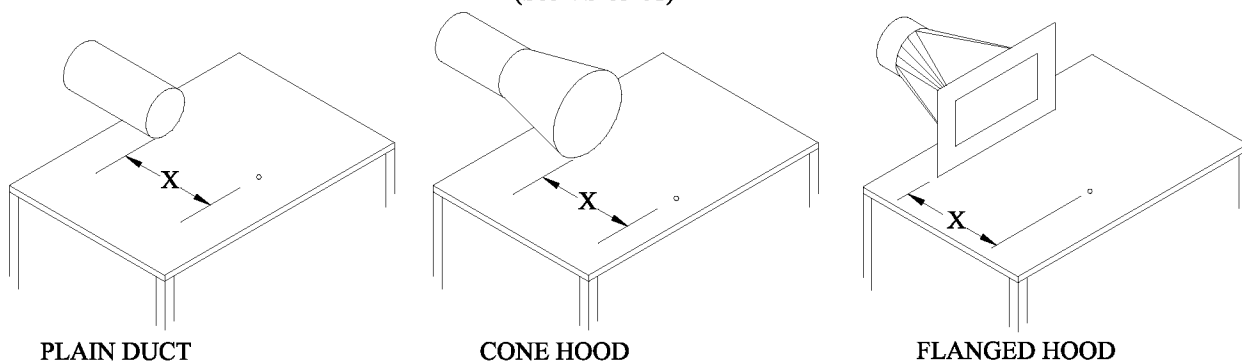


FLEXIBLE EXHAUST CONNECTIONS
(See VS-65-01)



RATE OF EXHAUST

X, inches	Plain duct cfm	Flange or cone, cfm
Up to 6	335	250
6-9	755	560
9-12	1335	1000

Face velocity = 1500 fpm

Minimum duct velocity = 3000 fpm

Plain duct entry loss = $0.93 VP_d$

Cone entry loss = $0.25 VP_d$

Flange entry loss = $0.50 VP_d$

Notes:

1. Locate work as close as possible to hood.
2. Hoods perform best when located to the side of the work.
3. Ventilation rates may be inadequate for toxic materials.
4. Velocities above 100-200 fpm may disturb shield gas.

GENERAL VENTILATION, where local exhaust cannot be used :

Rod, diam.	cfm/welder
5/32	1000
3/16	1500
1/4	3500
3/8	4500

OR

- A. For open areas, where welding fume can rise away from the breathing zone:
cfm required = $800 \times \text{lb/hour rod used}$
- B. For enclosed areas or positions where fume does not readily escape breathing zone:
cfm required = $1600 \times \text{lb/hour rod used}$

For toxic materials higher airflows are necessary and operator should use respiratory protection equipment.

Other types of hoods
Bench, see VS-90-01
Booth, for design see VS-90-30
 $Q = 100 \text{ cfm/ft}^2 \text{ of face opening}$



TITLE

WELDING VENTILATION
MOVABLE
EXHAUST HOODS

FIGURE

VS-90-02

DATE

1-91