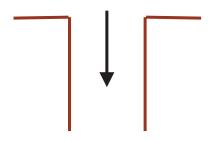
A5.4 Entry and Exit

(a) Sharp-edged entry:



$$X = 0.5$$

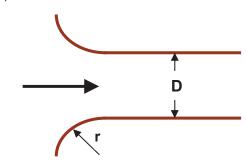
(b) Entrance to duct or pipe:



$$X = 1.0$$

(This is a real loss caused by turbulence at the inlet and should not be confused with the conversion of static pressure to velocity pressure)

(c) Bell-mouth:



$$X = 0.03 \text{ for } r/D \ge 0.2$$

(d) Exit loss: X = 1.0 (direct loss of kinetic energy).