



Coffee Break Training - Fire Protection Series

Access and Water Supplies: Fire Flow Formulas: Part 18: "International Fire Code" Fire Flow Requirements for Buildings

No. FP-2014-1 January 7, 2014

Learning Objective: The student will be able to explain the "International Fire Code®" (IFC) fire flow requirements for buildings.

IFC Appendix B, Fire-Flow Requirements for Buildings, provides another method for computing the required fire flow for buildings.

The IFC method employs a table that lists the minimum flow based on the "International Building Code®" construction type and size of the structure, or what is called the "fire flow calculation area." The fire flow calculation area is the sum of all floor area between firewalls with no openings or, in fire-resistive construction, the sum of the area of the three largest successive floors.



The fire flow requirement for this four-story non-combustible building can be obtained from a table in the "International Fire Code®" (IFC) appendix on fire flow requirements for buildings.

The following table is an extract from various lines of the complete table:

Construction Type	IA/IB	IIA/IIIA	IV/V-A	IIB/IIIB	V-B	Fire Flow (gpm)	Duration (hours)
Fire Area (Sq. Ft.)	0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
(Sq. m)	0-2,108	0-1,180	0-762	0-548	0-334	5,678 Lpm	2
(Sq. Ft.)	30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	2
(Sq. m)	2,806-33,595	1,579-2,025	1,013-1,198	734-910	446-576	7,570 Lpm	2
(Sq. Ft.)	128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,602-23,300	4,000	4
(Sq. m)	11,957-13,556	6,726-7,627	4,310-4,877	3,112-3,521	1,914-2,164	15,141 Lpm	4

Note: The table continues with additional values.

Next week's Coffee Break Training will provide an example from the IFC fire flow requirements for buildings method.

For more information on fire flow, you can take the NFA Online class "Testing and Evaluation of Water Supplies for Fire Protection" (Q0218) at <http://1.usa.gov/12JypCa>.



Eligible for Continuing Education Units (CEUs)
at www.usfa.fema.gov/nfaonline

For archived downloads, go to:
www.usfa.fema.gov/nfa/coffee-break/