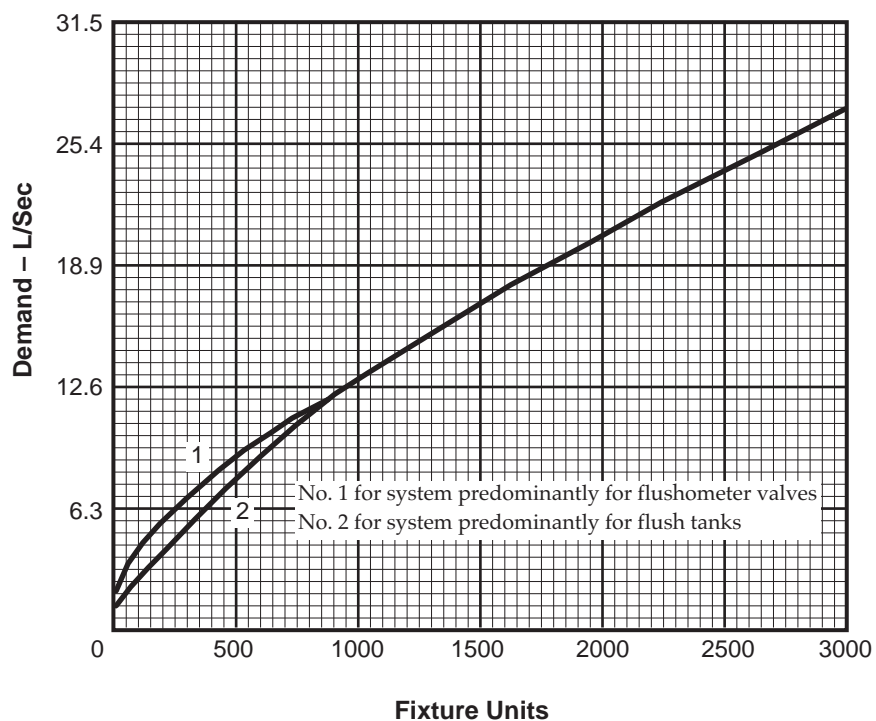


**TABLE A-3**  
**Equivalent Length of Pipe for Various Fittings\***

Diameter of Fitting mm	1.6rad Standard Elbow m	0.8rad Standard Elbow m	1.6rad Standard Tee m	Coupling or Straight Run of Tee m	Gate Valve m	Globe Valve m	Angle Valve m
10	0.3	0.2	0.5	0.1	0.1	2.4	1.2
15	0.6	0.4	0.9	0.2	0.1	4.6	2.4
20	0.7	0.5	1.2	0.2	0.2	6.1	3.6
15	0.9	0.6	1.5	0.3	0.2	7.6	4.6
32	1.2	0.7	1.8	0.4	0.2	10.7	5.5
40	1.5	0.9	2.1	0.5	0.3	13.7	6.7
50	2.1	1.2	3.0	0.6	0.4	16.8	8.5
65	2.4	1.5	3.6	0.7	0.5	19.8	10.4
80	3.0	1.8	4.6	0.9	0.6	24.3	12.2
100	4.3	2.4	6.4	1.2	0.8	38.1	16.8
125	5.2	3.0	7.6	1.5	1.0	42.7	21.3
150	6.1	3.7	9.1	1.8	1.2	50.3	24.3

SI: 1mm = 0.04 in.; 1m - 3.3 ft.

**Chart A-2**  
**Estimate Curves for Demand Load**



SI: 1L/s = 15.85 gpm