A 7.0 Example

Fixture Units and Estimated Demands

	Building Supply Demand				Branch to Hot Water System		
Kind of Fixtures	Number of Fixtures	Fixture Unit Demand	Total Units	Demand in L/s	Number of Fixtures	Fixture Unit Demand Calculation	Demand in L/s
Water Closets	130	8.0	1,040	–	–	–	–
Urinals	30	4.0	120	–	–	–	–
Shower heads	12	2.0	24	–	12	12 x 2 x 3/4=18	–
Lavatories	100	1.0	100	–	100	100 x 1 x 3/4=75	–
Service Sinks	27	3.0	81	–	27	27 x 3 x 3/4 =61	–
Total			1,365	15.8		154	3.4L/s

Allowing for 103.4kPa (15 psi) at the highest fixture under the maximum demand of 15.8L/s (252 gpm), the pressure available for friction loss is found by the following:

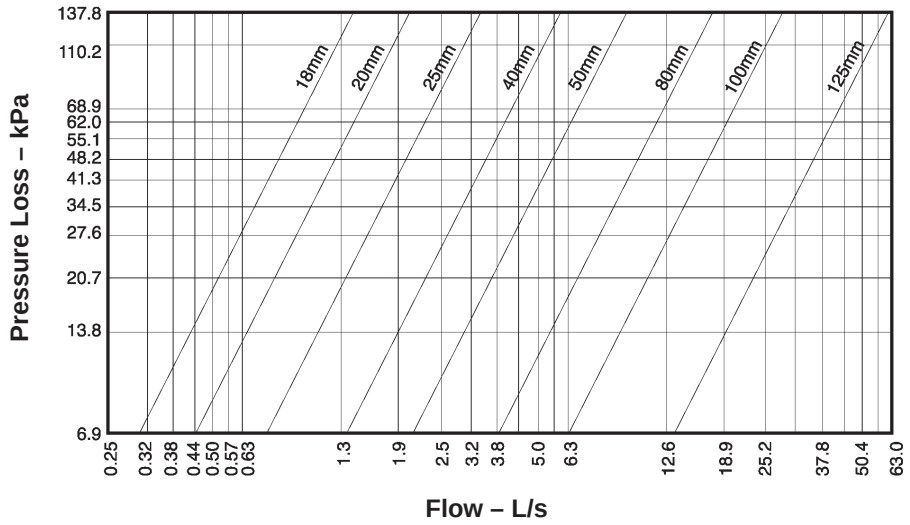
$$379 - [103.4 + (13.7 \times 9.8)] = 142.3\text{kPa}$$

The allowable friction loss per 100m of pipe is therefore:

$$100 \times 142.3 \div 61 = 233.2\text{kPa}$$

SI: 1kPa = 0.15 psi; 1L/s = 15.85 gpm

Chart A-1
Friction Losses for Disk-Type Water Meters



SI: 1kPa = 0.15 psi; 1L/s = 15.85 gpm