

Mainsflush Commercial Plumbing Sizing Guide

Building Type: Continuous Commercial Demand (Shopping Centres, Hospitals)

Medium Commercial	1	2	3	4	5	6	7	8	9	10	11	12	NUMBER OF VALVES
		24	50	50	50	50	100	100	100	100	100	100	100
10 Metres from Pressure Vessel	32	32	40	50	50	50	50	50	50	50	50	50	Required DN Pipe Size
15 Metres from Pressure Vessel	32	32	40	50	50	50	50	50	50	65	65	65	Required DN Pipe Size
20 Metres from Pressure Vessel	32	32	40	50	50	50	50	65	65	65	65	65	Required DN Pipe Size

Important Note: *If the property has the nominated DN pipe size (above) installed that is applicable to the type of application and the number of toilets being connected, pressure vessels may not be required.

Building Type: High Demand over short period of time (Theatres, Major Sporting Venues, Schools)

Heavy Commercial	1	2	3	4	5	6	7	8	9	10	11	12	NUMBER OF VALVES
		24	24	50	50	100	100	100	100	100	100	100	100
10 Metres from Pressure Vessel or larger pipe supply	32	65	65	65	65	65	65	65	65	65	65	65	Required DN Pipe Size
15 Metres from Pressure Vessel or larger pipe supply	32	65	65	65	65	65	65	65	80	80	80	80	Required DN Pipe Size
20 Metres from Pressure Vessel or larger pipe supply	32	65	65	65	65	65	80	80	80	80	80	80	Required DN Pipe Size

Important Note: *If the property has the nominated DN pipe size (above) installed that is applicable to the type of application and the number of toilets being connected, pressure vessels may not be required.

Chart Notes

- The above design criteria are required to be implemented when sizing water supply pipe systems servicing Mainsflush flush valves
- One or more Pressure Vessels may need to be installed where insufficient water is available or where pressure losses may affect the operation of the Mainsflush valves
- The tables above are based on the demand factors directly related to commercial buildings and the likely number of valves being activated at the same time. High demand locations such as schools and sporting venues may experience 50% of valves activated simultaneously. Demands in excess of this may require upsizing of pipes.

For the purpose of the exercise we have also assumed that the inlet static pressure at the valve is not less than 550 kPa (55 metres head) or 350 kPa (35 metres head) dynamic and where pressures are greater than 550 kPa flow characteristics would ensure greater volumes of water passing through the system. Pipe size requirements may change in high-pressure situations.

For installations of more than 6 valves we require that a qualified professional Hydraulics Engineer be engaged.