

Smart Office Toolkit – Water Cheat Sheet

Some interesting facts about water:



- Water is reusable and not renewable.
- The human body is comprised of 80% water.
- 70% of your skin is water.
- The average rainfall in South Africa is 500 mm, well below the world average of 860 mm.
- Only 1% of the earth's water is available for drinking; 2% is currently frozen.
- Water is the only substance on earth found naturally in three forms - solid, liquid and gas.
- You can survive about a month without food, but only 5 to 7 days without water.
- It is possible to drink water that was here in the dinosaur era.
- About 43% of South Africa's rain falls on 13% of the land, and only 9% of that, reaches our rivers.
- South Africa has 550 government dams, with a total capacity of 37 000 million m².
- Solid water (ice) floats on liquid water.
- The average urban home of 4,6 people uses 640 litres of water per day.
- A dripping tap can waste as much as 60 litres per day or 1 800 litres per month.
- A leaking toilet can waste up to 100 000 litres of water per year, enough to take three full baths every day.
- There are well over 100 000 leaking toilets in South Africa right now ... and usually people do not know about it.
- It takes about 2,5 litres of water to cook pasta and about five litres to clean the pot.
- The average automatic dishwasher uses 68 litres of water per wash cycle.
- The average washing machine uses about 100 litres of water per wash cycle.
- The average bath holds between 150 and 200 litres of water when filled to the brim.
- A toilet is the single biggest user of indoor water. On average, it uses 11 litres of water when flushed. A family of four will use 176 litres of water when each uses the toilet 4 times per day.
- A 100-watt light bulb left on for 12 hours uses almost three litres of water. This is the amount of water required to generate 100 watts of electricity for 12 hours.
- More than 50% of water applied to lawns is lost to evaporation or run-off due to overwatering and watering during the heat of the day instead of early morning or late afternoon.
- A garden hose can spray about 30 litres of water per minute.

Adapted from: www.dwaf.gov.za

Water consumption for different activities

Activity	Average litres per activity
Wash hands and face	1 to 3
Bath	80 to 150
5-minute shower	80
Teeth cleaning (tap on)	4 to 7
Toilet flushes	6 to 21
Drinking (cup)	0.25
Washing dishes (by hand)	18 single basin 36 double basin
Dishwasher	17 to 45
Washing machine (one 3 kg load)	45 to 80
Washing machine – top loader	66 to 150
Hand washing (1 tub load)	40
Leaking/dripping tap (1 drop/ second each day)	30 to 60
Food garden (per m ² per day)	4
Cooking (meal for 5 people)	3
Using the garden hose for an hour	600
Junior Flushmaster (mostly urinals)	6 litres per flush (factory set)
Standard Flushmaster (mostly toilets)	9 litres per flush (factory set)
Garden hose	30 litres per minute
Generate 1kWh of electricity in a 24 hour period	60 litres

Flushmaster

Unnecessarily frequent and long toilet flushes waste huge volumes of water. Schools often use the “flushmaster” units manufactured by Cobra Watertech, but it has been found that the following changes can also assist with saving water:

- reducing the duration of the flush to 2 to 3 seconds (from the 8 seconds previously), and,
- possibly increasing the flush intensity, where sufficient, to clear the toilet bowl.

Flushmaster with handle:



To reduce the flush duration, turn the screw above the handle clockwise. To increase the flush intensity, turn the screw on the bend exiting from the wall anticlockwise to open the inlet valve. If these settings result in water splattering on the toilet seat then the intensity of the flush will have to be reduced and the duration may need to be increased. If the flush remains unsatisfactory then a new set of rubber seals may need to be installed by a suitably experienced person.

The screw on the bend will need to be turned clockwise to shut off the inlet valve. After closing the inlet valve and before starting to replace the rubber seals check that no water enters the bowl when the toilet handle is depressed.

Flushmaster with push button:

The Flushmaster with a push button valve has less of a time adjustment range than the Flushmaster with a handle. The pushbutton retainer is knurled and locked with a 2,5 mm Allen screw in the body below it. The activating pin has an offset cam on the inside and the whole unit can be rotated 360 degrees. When the cam is on top the flush is longer and shorter when it is at the bottom.

The easiest way to adjust it is to remove the locking grub screw and pull the whole button assembly out, choose the location of the cam and push it back in that position and lock it with the grub screw. Flow adjustment is on the ball control valve located on the underside of the valve inlet near the wall.



Information and photographs courtesy of Flushmaster.