

OBJECTIVE ZERO LEAKS IN WCS IN PUBLIC PLACES:

Easily install a DELABIE cistern-less flush WC system



1.5 L
A leak from a toilet cistern wastes around

600 litres/day

400 1.5 litre water bottles is the amount of drinking water wasted each day

- Building performance standards are becoming increasingly rigorous.
- Buildings must seek to **reduce their overall carbon footprint (RE2020)**. The government-issued **Approved Document G (UK Building Regulations)** contains statutory guidance to improve water efficiency in washrooms.
- The UK government's Plan for Water has set an ambitious target to **reduce the use of public water supply per person by 20% by 2038**.

REGULATIONS



CODE OF PRACTICE
Instructions and advice relating to the installation of a cistern-less direct flush system can be found on the **CIPHE** website and in the **DTU, the French code of practice**.



KEY TAKEAWAY: SIMULTANEITY



In a washroom installation, the points-of-use (*toilets, basin taps, urinals, showers*) will not all be in use at the same time.

In order to determine the correct sizing for the supply pipework, the probability of sanitary fixtures being used at the same time must be taken into account: **this is known as simultaneity**.

The pipework dimensions are calculated using a revised number of appliances, to reflect the actual use in practice.

Calculating how many cistern-less toilets will be used simultaneously is simple:

Number of toilets installed	Up to 3 WCs	From 4 to 12 WCs	From 13 to 24 WCs	From 25 to 50 WCs	Over 50 WCs
Number of toilets in simultaneous use	1 WC	2 WC	3 WC	4 WC	5 WC

DELABIE GUIDANCE



TECHNICAL GUIDANCE

- To ensure an optimal flush, each point of use must have **a flow rate of at least 1 litre per second with 1 bar dynamic pressure**.
- The supply pipe to the direct flush system must have a **minimum internal diameter of 20mm**. It is important to be aware of any **pressure losses** in the system.



MEASUREMENTS

Accurate sizing of the supply pipework is essential for the system to work well.

The necessary calculations for the sizing of the header and supply pipes are simplified by following the advice in the CIPHE design guide, as well as the manufacturer's recommendations.

For your convenience, please find step-by-step guides below, to aid in the calculation of supply pipes and final horizontal pipework.



[Calculation criteria for water supply pipes](#)



[Recommendations for sizing horizontal final pipework](#)



A TOILET WITH A CISTERN



Cistern-fed toilets have many disadvantages: high water bills, frequent maintenance, bacterial development.
A cistern-fed toilet will become more and more expensive, the longer it is in use.



A TOILET WITHOUT A CISTERN



DELABIE's cistern-less flush system is reliable, hard-wearing and designed for public places.
The longer a cistern-less toilet is installed, the more costs will be reduced and drinking water will be saved.

DELABIE

30 YEAR WARRANTY **50** YEARS REPAIRABILITY