

The Australian & New Zealand Standards (AS/NZS 3500.1:2003, Section 4.3) has grouped the risk category of backflow into 3 levels:

- Low hazard (any condition, device or practice that, constitutes a nuisance but does not endanger health or cause injury)
- Medium hazard (any - - - - that, has the potential to endanger health)
- High hazard (any - - - - that, has the potential to cause death)

**Section 4.4.2** states that “Backflow protection devices shall be provided in accordance with –

- (a) The hazard rating given in clause 4.3; and
- (b) The suitability of the device shown in Table 4.1

Note: See Appendix F for examples of devices relative to levels of protection”

For the purpose of understanding the standards: “Bidets” have an ascending spray, and “Bidettes” (an Australian ambiguity) are to be thought of as having an outlet above the rim of the pan.

**Appendix F Table 1** specifies bidets as **High Hazard**, and table 4.1 specifies an **RPZD** (reduced pressure zone device) or a **RBT** (registered break tank) as suitable protection for this application.

**Section 10A.2.2** states: “A bidette shall be installed with a non-testable device or a 25 mm air gap”.

**Section 10A.2.3 Toilet seat douches** states that: “where the douche outlet is, in all positions, at least 25 mm above the rim of the pan, no backflow prevention is required”.

This same document specifies that: “where the outlet is in any position, less than 25mm above the rim of the pan, a backflow prevention device, complying with AS/NZS 2845.1 or AS/NZS 2845.2, shall be installed”. (RPZD or RBT)

However, **ATS 5200.051-2005, Technical Specification for plumbing and drainage products - Bidet douche seats, Section 8.3** specifies: “The douche seat shall be supplied with a low hazard mechanical backflow prevention device complying with AS/NZS 2845.1.” (An approved non-testable dual check valve will meet this requirement) This publication does apply specifically to ‘douche seats that are self-contained for installation on water closet (WC) pans (toilets) and direct connection to the water supply’ (generally understood to be electronic bidet seats).

**Electronic Bidet Seats** usually control water flow with electrically operated solenoid valves – just like dishwashers and washing machines. Without an electrical connection it is not normally possible for the water to flow in either direction. Electronic bidets without solenoid valves will normally (as an alternative) incorporate a vacuum-breaker device, positioned at least 25mm above the rim of the toilet pan.

**Non-electric Bidet Seats** certainly also fit into the classification of a “Bidet Douche Seat”, but unless they incorporate a vacuum breaker device (with an inlet at least 25mm above the rim of the pan) it is unlikely they will be able to comply with Australian Backflow Prevention Standards (even if fitted with an approved dual check valve).

**Under-seat Bidets** are not referred to explicitly in the standards but cannot be strictly classed as a “Toilet seat douche” (or a Bidet douche seat) because they attach under the seat, and are not necessarily an integral part of it. One possible exception here is the USABidet which does attach to the seat itself. It could be assumed that under seat Bidets which have an outlet the same distance below the rim of the pan as Electronic Bidets, should be allowed to use the same protection: i.e. an approved dual check valve. But remember; under seat bidets do not normally have the additional backflow protection supplied by solenoid valves or vacuum-breaker devices. Also, the actual distance of the outlet below the rim of the pan can vary greatly depending on the model. These Bidets do therefore remain a “grey area” in regard to the applicable standards, and depending on the outlet position may fall into the High Hazard category (the same as traditional bidets which have an ascending spray). Strictly interpreting the Standards and in the absence of any further clarification; all under seat bidets will come under the ‘High Hazard’ category for risk of backflow.

**Hand-held Bidets** are also not specifically described in the standards, but can be covered under: AS/NZS 3500.1:2003, Appendix E, Examples of potential cross connections, E2,(c) *Domestic installation*: “**Interconnection of the water service to a - - bidet, - - garden hoses where used to empty or clean out - - discharge point of the water service in sanitary flushing cisterns**” (toilet). The danger here obviously, is that the bidet hose could be deposited below water level in the toilet pan (perhaps to clear a blockage). This possibility for incorrect use unfortunately puts Hand held Bidets into the High Hazard category.

A **reduced pressure zone device** (RPZ valve) complying with AS/NZS 2845.1 for ‘High Hazard’ applications can be obtained for around \$400. However please note; **Standard Plumbing and Drainage Regulation 2003 (Division 2)** dictates that the owner of this installed device must (a) register it with the Local Government Authority, and (b) at least once a year have the device tested by a person who is licensed to do the work (\$100 Fee). This person must within 10 days of performing the test, give a written report to the appropriate local government department in the approved form.

This same publication classifies installation, commissioning and testing of backflow prevention devices as **Regulated Work** (to be performed only by licensed persons who have also been endorsed for this particular work (backflow prevention).