

Pumpset configurations

AS 2419.1 – 2005, Clause 6.2 Pumpset configurations, indicates the number of on-site pumpsets required to achieve the hydrant flow and pressure requirements of the Standard.

Clause 6.2(d) states, if connected to a reticulated water supply and installed in a building not greater than 25 m in effective height, one pump driven by:

- (i) compression ignition engine;
- (ii) an electric motor supplied from an emergency power generator; or
- (iii) an electric motor connected to two completely independent power sources through an automatic changeover facility.

AS 2419.1 – 2005 does not provide a definition of what constitutes a reticulated water supply. QFES interpret that a reticulated water supply is a network of pipes provided solely by a water utility that will supply uninterrupted water at a positive pressure.

Where the reticulated water supply is connected to, and directly supplies, the hydrant system but has insufficient capacity to maintain an effective firefighting system, consideration to the installation of one pumpset may be appropriate. Generally, this is where the reticulated water supply is adequate in volume but lacks the required pressure to meet the standard. QFES supports the installation of one pump where this scenario can comply with AS 2419.1 – 2005.

If connected to a reticulated water supply and the only on-site pumpset fails, a safety measure for QFES is that the reticulated water supply should provide a spray/jet of water, sufficient to allow firefighters to exit to a point of safety.

Where fire hydrant systems/pumpsets are connected to, and draw water from, an on-site water storage tank or break tank, QFES interprets these as being not connected to a reticulated water supply.

Alternatively, a performance solution assessed against the performance requirements of the National Construction Code may be considered.