



POSITION STATEMENT SUMMARY

Fixed suction connection for below-ground water supply

Position

Effective 30 August 2024, the following is a position of Fire and Rescue NSW (FRNSW):

FRNSW require the design of any large bore (i.e. 150 mm) fixed suction connection to satisfy Clause 4.4 of AS 2419.1:2021. Reference should also be made to the informative section K.5 in Appendix K of AS 2419.1:2021 to achieve the requirements and the interrelationships between them.

Note: These requirements are dictated by the ability to prime air from the fixed suction pipework and connected suction hoses during draughting operations.

The maximum volume of dry pipe between the lowest water level and suction connection outlet must not exceed 0.07 m³. This equates to a maximum length of 3.96 m of DN 150 pipework.

FRNSW also requires the fixed suction connection to always be accessible. Reference should be made to FRNSW position [Large-bore suction connections](#).

Reference must be made to the FRNSW website to ensure this position is current at the time of use, and this position has not been superseded or revoked.

Summary

This position statement supersedes the previous position last updated 19 February 2020. The position has been revised in consideration of the requirements from AS 2419.1:2021, being the standard for fire hydrant systems as referenced by the current NCC.

The position statement outlines the design requirements for large bore fixed suction connections that serve any below-ground water supply, which includes:

- compliance with normative Clause 4.4 of AS 2419.1:2021,
- consideration of the informative advice contained in Appendix K.5 of AS 2419.1:2021, which details the functions and interrelationships of the Clause 4.4 requirements.

Informative commentary notes that the design requirements are necessary due to the limitations of primers when initiating draughting operations, hence the position also being applicable to existing fixed suction connections. Any fixed suction connection not meeting these design requirements may result in the below-ground static water supply not being useable under certain conditions.

The position iterates the maximum dry pipe volume specified by Clause 4.4(c) of AS 2419.1:2021 and emphasises the equivalent length of DN 150 pipe to the point of lowest water level is 3.96 m. It should be noted that Appendix K.5 of AS 2419.1:2021 incorrectly states that the equivalent length is 3.4 m, however calculations confirm that the correct length is 3.96m.

The position clarifies that the fixed suction connection comprises a large-bore suction connection that is required to be accessible and directs building proponents to the [Large-bore suction connections](#) position statement.

This position statement has been authorised for release by Chief Superintendent Fire Safety, FRNSW.

Fire and Rescue NSW

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Contact us

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