

In-Line Metering of Water Used for Fire Protection

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1. PURPOSE

The purpose of this guideline is to provide water authorities, building designers, building certifiers and Fire Rescue Victoria's (FRV) Community Safety Department with the Fire Rescue Commissioner's position with respect to the installation of in-line water meters to any fire service water supply. Furthermore, the guideline also ensures that a clear and consistent approach is adopted when considering the addition of a water meter to any fire service.

2. SCOPE

AS 3500.1 notes that the installation of a water authority meter should be undertaken in accordance with the water authority's requirements, whilst AS 2419.1 states "*where the metering of water supply for fire fighting purposes is required by the water agency, in-line meters shall not be installed.*"

Should the water authority require in-line metering of water used for fire protection, the Fire Rescue Commissioner recommends the following meter parameters discussed in this guideline be achieved.

3. EQUIPMENT RECOMMENDATIONS FOR NEW AND EXISTING SYSTEMS

Any in-line meter adopted for the purpose of measuring the flow of fire service water for a new system is required:

- to be included in the hydraulic loss calculations when designing the capacity of the fire protection system, or if existing, have a hydraulic loss that is as low as practicable
- to not reduce the system pressure at the most disadvantaged outlet(s) below the minimum design pressure
- to be failsafe in the event that the elements comprising the metering system are corroded, damaged, jammed or blocked (i.e. the design head loss of the meter will not be exceeded at any time during operation due to meter failure)
- to not affect the use of fire brigade boosting equipment if the booster connection is designed downstream of the meter
- to be installed as per Melbourne Water's '*Water Metering and Servicing Guidelines*'.

4. COMMISSIONING AND MAINTENANCE

All fixed metering equipment, once installed, must be subject to a commissioning test to ensure that it does not provide any disadvantage to the performance of the fire protection system in accordance with the relevant Australian Standards.

The installation of an in-line meter must not reduce the reliability or increase the downtime of the system that would otherwise be achieved, including during periods of programmed maintenance or emergency repair. This includes servicing, calibration, repair or replacement of the metering device.

Note: in accordance with Regulation 129 of the Building Regulations 2018 (the Regulations), where an in-line meter is proposed to be installed to serve a building's fire protection system, the Fire Rescue Commissioner's report and consent must be obtained in relation to the application for a building permit.

***Note:** this is a controlled document and may only be modified by authorised personnel after review by FRV's Fire Safety Advisory Group.*