

# AON SPRINKLER CERTIFICATION



## Aon New Zealand

Aon Sprinkler Certification  
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<b>Aon Sprinkler Certification Technical Note</b>		
<b>Note Number:</b> 15-19	<b>Issue:</b> 1	<b>Date:</b> 23 November 2015
<b>Subject</b>	<b>Strainer Listings and Listing Procedures</b>	
Notice: Aon Sprinkler Certification Technical Notes provide guidance notes which may be used in certification of sprinkler installations by Aon New Zealand. If sprinkler installations are being certified by any other Sprinkler System Certifier, these Technical Notes may not apply.		

## Installation

With reference to NZS4541:2013 clause 404.10, strainers used on water supplies to fire sprinkler systems are required to be listed. We remind installation contractors that listed strainers are to be used and evidence of such may be required by the system inspector or SSC as part of the approval process for new work.

We note that when existing systems are upgraded and the new design flow exceeds both 2300 L/min and the existing system demand, a listed strainer is required to be retrofitted to the installation. Subject to specific agreement with Aon alternative locations may be accepted if there is no practical location on the incoming water main.

Strainers need to be located in a position that enables maintenance by a single service person without need for any access equipment. There shall be sufficient clearance to remove the strainer basket without removing the strainer body.

## Listing procedure

For Aon to list a strainer the following tests and information are required:-

- a) Workshop drawing of the strainer.
- b) Calculation page which details for each pipe line size and design flow the following:
  - i. basket size,
  - ii. mesh open area %
  - iii. open area of basket,
  - iv. required open area for 25mm<sup>2</sup> per litre flow,
  - v. required open area for 4x cross sectional area of pipeline<sup>1</sup>.
- c) Workshop pressure test to at least 1600 kPa.
- d) Witnessed flow testing of the strainer, when blocked 50%, to determine the pressure loss curve for the unit<sup>2</sup>. At a minimum the bottom half of the basket is to be obscured<sup>3</sup>. Flow testing needs to be conducted at a steady state of flow and using gauges of sufficient scale to provide indication of the expected small drop in pressure.
- e) After flow testing the strainer and basket are to be inspected for signs of damage.
- f) Where there is incremental sizing of the strainer barrel length pressure loss tests for a smaller volume model may be applied to a larger volume unit.

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- g) We do not require the strainer to be completely blocked and pressure tested<sup>4</sup>. We are accepting a flow test at 150% of the rated flow, without basket distortion, as an equivalency to this requirement.

### Notes

- 1 This calculation may be done using the actual or the nominal diameter.
- 2 We accept any person from the Aon SSC team or any accredited sprinkler system inspector or a Professional Engineer as the witness.
- 3 Suitable media for partially blocking the strainer could include clean stones or a rubber mat. The witness needs to be satisfied that the media will not shift and give a false result.
- 4 We have been unable to determine a practical method to achieve this requirement.

A handwritten signature in blue ink, appearing to read "Stephen Ridder", is positioned above the printed name and title.

Stephen Ridder  
Fire Protection Consultant