

Nordic Residential Fire Sprinkler Guideline -

A Possible European Standard for Residential sprinklers?

Gosta Holmstedt, Swedish Fire Sprinkler Association



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Nordic Residential Fire Sprinkler Guideline

- An increased interest in the Nordic countries for residential sprinkler systems since 2005/2006
- Swedish/Norwegian initiative due to market pressure to upgrade/revise the existing recommendations from 2002 for residential sprinklers design, installation & maintenance
- First inter-Nordic meeting in Copenhagen in April 2007
- Working Group 1 was establ, Design, Installation and Maintenance
- Working Group 2, Guidelines to performance based fire engineering following installation of sprinkler systems

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Working Group 1, Design, Installation and Maintenance:

Representation from each country:

Denmark: 3

Island: 2

Norway: 3

Sweden: 3

EFSN: Nick Groos, liason from EFSN

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Where are we today?

- ▶ Final proposal to new guidelines from WG1 ready in September 2008
- ▶ The new guidelines covers ALL types of buildings - private homes, care institutions, hotels/motels, student housing etc (NFPA 13D, NFPA 13R & NFPA 13)
- ▶ The drafted guidelines have been handed over from WG1 to the standardisation bodies in each Nordic country on 15 October, 2008
- ▶ INSTA (Inter Nordic Standardization Cooperation) decided that each country should circulate the final draft for consideration - comments requested latest 2009-01-20
- ▶ Comments to be studied by WG1 urgently with final proposal to each national standardisation bodies asap
- ▶ Target? - New residential sprinkler standard printed & released by 30th June, 2009

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SS 88 30 01(INSTA 900-1)

Date: 2008-11-20

Residential sprinkler systems – Part 1: Design, installation and maintenance

(DK) Boligsprinkling – Projektering, installation og vedligeholdelse

(IS) Heimilisúðakerfi – Hönnun, uppsetning og viðhald

(NO) Boligsprinkler – Dimensjonering, installering og vedlikehold

(SE) Boendesprinkler – Utförande, installation och underhåll

(SF) Asuntosprinklerilaitteistot – Suunnittelu, asentaminen ja kunnossapito

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6 Classification of occupancies

6.1 Building types

The residential sprinkler system shall be designed according to the type of building to be protected. The building shall be classified as Type 1, Type 2 or Type 3 as shown in Table 1.

If an area exists within a building as defined in Table 1, and contains a hazard other than that which would typically be found in a residential occupancy, then that area shall be sprinkler protected according to EN 12845.

Table 1 – Description of types of buildings

Type of Building	Description
1	<p>Buildings that do not permanently house people who need assistance exiting the building and can be categorized as:</p> <ul style="list-style-type: none">- One and two family dwellings;- Row houses having three levels above ground including the attic, and one basement level; or- Residential buildings with not more than 4 dwelling units up to a maximum of three stories in height and one basement level
2	<p>Buildings arranged as residential occupancies up to a maximum of four stories in height and one basement level, excluding any building arranged to permanently house people who need assistance exiting the building</p>
3	<ul style="list-style-type: none">- Buildings, or parts of buildings, arranged to house people who need assistance exiting the building- Buildings of 5 stories in height or more, arranged as residential occupancies.
<p>NOTE For buildings not covered by the descriptions in Table 1, the type of building should be decided by the authority.</p>	

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NOTE For buildings not covered by the descriptions in Table 1, the type of building should be decided by the authority.

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Table 2 – Minimum design criteria

Type of building	Minimum design discharge density (mm/min)	Number of design sprinklers	Minimum duration of water supply (minutes)
1	2,04	1-2 ¹⁾	10
2	2,04	1-4 ¹⁾	30
3	4,08	4	30

1) The number of design sprinklers required are defined in 7.2

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Table 3 – Minimum design criteria in case of compensation for other fire protection

Type of building	Minimum design discharge density (mm/min)	Minimum number of design sprinklers	Minimum duration of water supply (minutes)
1	2,25	2	15 ²⁾
2	5	4 ¹⁾	30
3	5	4 ¹⁾	30

1) The minimum numbers of design sprinklers shall be calculated by acceptable analytic calculation methods. In any case the minimum number of design sprinklers shall not be less than 4.

2) The minimum duration of water supply shall be calculated by acceptable analytic calculation methods. In any case the duration of water supply shall not be less than 15 minutes.