

How old is this sprinkler head?

How can you tell how old a sprinkler head is? This seems very simple but sometimes it is quite hard to find out. In this article, Johan Hoogeweg, Fire Safety Consultant, takes a closer look at how to determine the production year of a sprinkler head.

One of the most important parts of a sprinkler system is the sprinkler head itself. Without a properly functioning sprinkler head, the system will certainly not detect and control or extinguish a fire. All sprinkler standards include requirements and/or advice on how to carry out maintenance in order to keep the installation in a state where it will function when needed. For example annex K of EN 12845 states that after 25 years 'A number of sprinklers should be removed and tested to ensure that they are fully functional.'

Test frequency

Depending on the applicable maintenance standard, different moments apply when sprinkler heads must be tested. Table 1 shows the test intervals for two commonly used maintenance standards.

Standard	Sprinkler type / situation	Frequency
EN 12845	All sprinklers	25 years
NFPA 25 ²	Sprinklers	50 years and every 10 years thereafter
	Sprinklers	75 years and every 5 years thereafter
	Dry-sprinklers	15 years and every 10 years thereafter
	Extra-high temperature or greater solder type sprinklers	5 years
	Fast response sprinklers	20 years and every 5 years thereafter
	Sprinklers in harsh environments	5 years

Table 1: Inspection frequency for sprinkler heads
NFPA 25 also states that sprinkler heads manufactured prior to 1920 should be replaced.

How can you find a date?

How can you tell what the production year of a sprinkler head is? How would you find out the age? Drawings and documents often do not give this information, are incomplete or there have been many changes in the building resulting in many differences in the system. Sometimes you can find the heads in the spare sprinkler cabinet in the sprinkler pump room or near the alarm valves.

Adding a production date on the head is actually quite common since the first sprinkler heads appeared on the market. Adding a date is also mentioned as a requirement in modern product standards like FM class 2000³: 'the following shall be displayed on a non-operating part of the sprinkler: Year of manufacture...'

Each manufacturer places it in a different location. Common locations



Figure 1: date on the deflector 1979, Wormald model D



Figure 2: date on the thermal link 1899, Dowson Taylor & CO.LTD.



Figure 3: date on the frame 1909, Rockwood model B 'double hat'



Figure 4: Date on the thermal link '65', behind the 'hook' 1965, Automatic

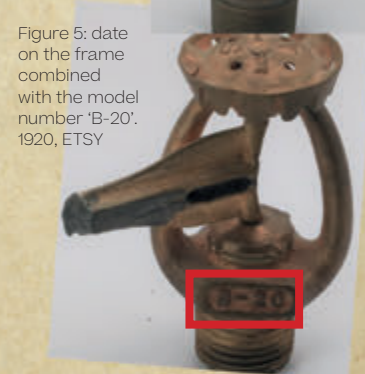


Figure 5: date on the frame combined with the model number 'B-20'. 1920, ETSY

where a date on the head can be found are:

- on the deflector, figure 1
- on the thermal link, figure 2
- on the frame, figure 3

The way a date is written may vary, as an example the following ways occur: 1990, 90 or a combination of a model number with a year like M90. 04 can be 1904 or 2004, but in general based on the design of the head, it is easy to see the correct period.

With this knowledge, you can take the ladder and go up to the ceiling. Can you easily see the date? Well, sometimes it is very clear, sometimes you need a magnifying glass and in other cases it is so obvious that you overlook it. Dirt, dust or a little paint on the frame can easily hide the date. Some manufacturers are really good at minimal markings or hiding them.

The following pictures show some places where you can find the date on a sprinkler head.



Figure 6: Date on the thermal link in small letters '98'. 1998 Reliable

Figure 7: Date on the frame in thin letters '19 53' Angus Fire Armor Ltd.



Figure 8: Witter head

Sprinklers without a date?

Sometimes there is no date on a sprinkler head, particularly on sprinklers from before 1900. From literature it is often possible to determine the period in which the sprinkler head was produced. A good reference book is 'Automatic Sprinkler protection', published in 1919⁴. The exact production date is not mentioned but in 1906 they made the model E and older models were no longer produced. So it is safe to say this head was produced before 1906.

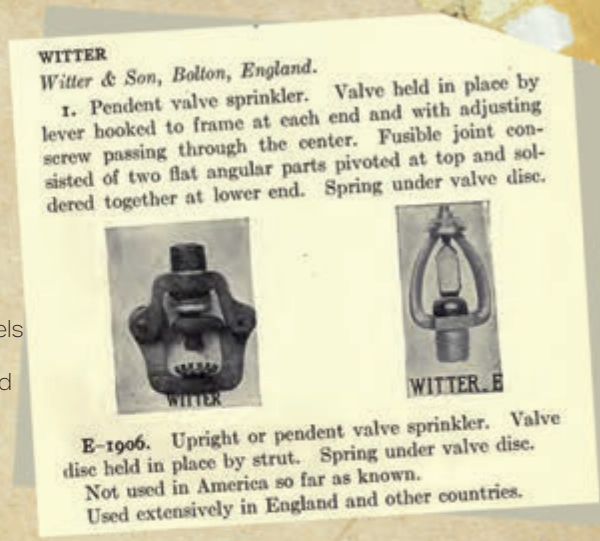


Figure 9: reference in literature

References

- 1 EN 12845 Fixed firefighting systems - Automatic sprinkler systems - Design, installation and maintenance: 2015
- 2 NFPA 25 Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems: 2020
- 3 FM Class Number 2000 Approval Standard for Automatic Sprinklers for Fire Protection: 2018
- 4 Automatic Sprinkler protection, Gorham Dana: 1919
All pictures are taken from the private collection of the author