



QUICK RESPONSE

Saving life and property through effective licensing, plan review, and inspection of fire protection systems.

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SPRINKLER DISCHARGE PATTERNS – COMBUSTIBLE CONCEALED SPACES

New to the 2002 edition of NFPA 13 is the requirement that sprinklers located in certain combustible concealed spaces shall be listed for such use. (Section 8.14.1.6).

Testing has shown that the **discharge pattern** of standard spray sprinklers is inhibited in these spaces. The umbrella like **discharge pattern** of standard spray poses a difficult challenge when trying to achieve effective coverage within a shallow space. As such, standard sprinklers are less effective at fire control involving the combustible members above the sprinkler.

The figures below demonstrate the different **discharge patterns** between standard spray and combustible concealed space sprinklers.



Flames above sprinklers.



Standard spray sprinkler discharge pattern ineffective above sprinkler.

