Engineering Specification

Model HL-22 ESFR Pendent Automatic Sprinklers

**Recommended CSI MasterFormat Specification Location: 21 13 00, Fire Suppression Sprinkler Systems (formerly 13930)**

Sprinklers shall be Early Suppression Fast Response (ESFR) pendent suppression mode sprinklers **[**cULus Listed**] [**FM Approved**]** for commodity storage applications. Sprinkler frame and deflector to be of bronze construction with deflector located inside of the frame arms. Sprinkler shall have a maximum listed/approved ceiling-to-deflector distance of 18”. Fusible alloy solder link assembly shall utilize the strut and lever principle of operation with approved fast response beryllium-nickel thermal element with protective **[**black painted, 165ºF (74ºC)**] [**gray painted, 212ºF (100ºC)**]** coating. Water seal shall consist of a Teflon-coated Bellville spring washer and brass cap assembly containing no plastic parts. ESFR sprinklers shall have a nominal K-factor of 22.4 gpm/psi1/2 (320 l/min/bar1/2) and **[**1” NPT threaded**] [**ISO7 R-1 threaded**] [**IGSTM Style V9 Sprinkler Coupling**]** end connections. Sprinklers shall have a rated working pressure of 175 psi (12 bar). Sprinkler temperature rating shall be **[**Ordinary 165ºF (74ºC)**] [**Intermediate 212ºF (100ºC)**]**. ESFR pendent sprinklers shall be Reliable Model HL-22, SIN RA1011. Refer to Reliable Bulletin 010 for associated sprinkler information.

**For Specific Application (UL Listing) for 45’ storage of Class I - IV and cartoned unexpanded Group A plastic in 48’ buildings, add:**

Sprinklers shall have a Specific Application UL listing for 45’ storage of Class I - IV and cartoned unexpanded Group A plastic in 48’ buildings. Refer to Table C of Reliable Bulletin 010 for associated information.