

INSTALLATION GUIDE

LIFECO Horizontal Sidewall Sprinkler

For Models: LF340 and LF341

GENERAL DESCRIPTION

The 1/2 inch orifice LIFECO Standard and Quick Response (ref. ISO 6182) Horizontal Sidewall Sprinklers are automatic sprinklers of the frangible bulb type. They are "Standard and Quick response - standard orifice spray Sprinklers" intended for use in fire Sprinkler systems designed in accordance with the Standard installation rules recognized by the applicable Listing or Approval agency (e.g., UL Listing is based on NFPA 13 requirements). The Horizontal Sidewall Sprinklers are generally used in lieu of pendent and upright sprinklers because of building consideration or installation economy considerations. They are designed for installation along a wall or the side of a beam and just beneath a smooth ceiling. Installed with their centerline of waterway, these sprinklers produce a quarter-spherical water discharge pattern that is predominately directed downward and outward from the deflector; however, a portion of the spray is also directed towards the back wall.

TECHNICAL DATA

The 1/2 inch orifice LIFECO Standard and Quick Response Horizontal Sidewall Sprinklers are rated for use at a maximum service pressure of 12.3 kg/cm² (175psi) and they are available in the temperature ratings of 68°C (155°F, Red) and 93°C (200°F, Green).

Recessed version of the Model LF340 and LF341 Sprinklers are obtained by utilizing the Model LF340 and LF341 Horizontal Sidewall Sprinklers in combination with either the Model LF100 Recessed Escutcheon. The Recessed Escutcheons are available with a nickel chrome

plated finish or a color coated finish in any color.

The flow rates "Q" in LPM (GPM) are determined by the following formula:

$$Q = K \sqrt{P}$$

Where the nominal discharge coefficient "K" equals 80(5.6); and, "P" equals the residual flowing pressure in kgf/cm² (psi). Listing standards permit the actual value of "K" to vary from 76.4 to 83.6 (5.3 to 5.8); however, for hydraulic calculations, a K-factor of 80(5.6) is to be applied.

The Frame is made of brass forging (copper alloy) per KS D5101. The bulb cap (bulb retainer) is copper alloy per KS D5102 (C5191).

The Spring Seat consists of a Beryllium Nickel disc spring that is sealed on both its inside and outside faces with a Teflon gasket.

The Compression Screw is copper alloy per KS D5101 (C3604) and the Deflector is copper alloy per KS D5201 (C2200). The model LF340 Sprinkler represents Standard Response Horizontal Sidewall sprinkler that utilizes a 5 mm diameter frangible bulb made by JOB. The model LF341 Sprinkler represents Quick Response Horizontal Sidewall sprinkler that utilizes a 3 mm diameter frangible bulb made by JOB. The Frame and Deflector of these sprinklers are Nickel Chrome plated. The bulb liquid color is red and green in accordance with the temperature ratings.

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NOTE:

Do not install any bulb type sprinkler if the bulb is cracked or there is a loss of liquid from the bulb.

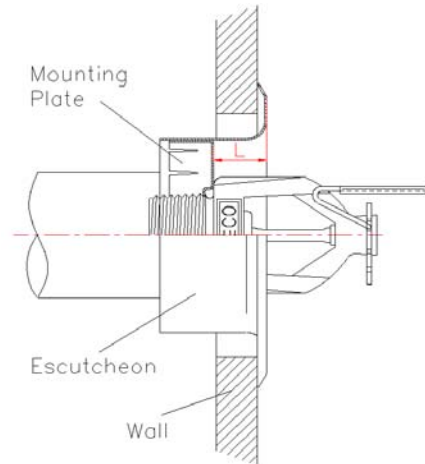
The LIFECO Standard and Quick Response Sprinklers must be installed in accordance with the following instructions.

1. Prior to installing horizontal sidewall sprinklers and if applicable, verify that the face of the sprinkler fitting is within the proper range of distance which can be accommodated by the type of escutcheon being used.

When installing a Model LF340 and LF341 Horizontal Sidewall Sprinklers with LF100 Recessed Escutcheons, for best overall appearance, use "High Adjustment Dimension" ($L_{min} = \text{FLUSH}$, $L_{max} = 14 \text{ mm}$ [0.55 in]). The remaining escutcheon plate adjustment can then be used to compensate for the possible manufacturing variations in the take-out of the fittings, as well as in the make-in of the sprinklers (as permitted by ANSI B1.20.1)

2. The Model LF340 and LF341 Horizontal Sidewall Sprinklers must be installed with the centerline of waterway horizontal and perpendicular to a back wall surface.

3. After installing the F100 mounting plate (or other escutcheon, as applicable), over the sprinkler threads, apply pipe thread sealant sparingly to the sprinkler threads only. Use of a Teflon based pipe thread sealant is recommended.



Sidewall Sprinkler(Horizontal)

Installation Diagram

4. Hand-tighten the sprinkler into the sprinkler fitting.
5. Select the appropriate Sprinkler Wrench for tightening the sprinkler into the sprinkler fitting. The word "TOP" on the Deflector must face upwards towards the ceiling.

NOTE:

A leak tight 1/2 inch PT sprinkler joint should be obtained with a torque of 9.5 to 19.0 Nm (7 to 14 ft. lbs.). A maximum of 28.5 Nm (21 ft. lbs.) of torque is to be used to install the sprinklers. Higher levels of torque may distort the sprinkler inlet with consequent leakage or impairment of the sprinkler.

CARE AND MAINTENANCE

Automatic Sprinklers must never be shipped or stored where their temperature will exceed 38°C/100°F and they must never be painted, plated, coated or otherwise altered after leaving factory. Modified sprinklers must be replaced. Sprinklers that have been exposed to corrosive

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products of combustion, but have not operated, should be replaced if they cannot be completely cleaned by wiping the sprinkler with a cloth or by brushing it with a soft bristle brush.

Care must be exercised to avoid damage to the sprinklers—both before and after installation. Sprinklers damaged by dropping, striking, wrench twist/slippage, or the like, and must be replaced. Also, replace any sprinkler that has a cracked bulb or that has lost liquid from its bulb (ref. Installation Section Note)

NOTE:

Absence of an escutcheon, which is used to cover a clearance hole, may delay the time to sprinkler operation in a fire situation.

Before closing a fire protection system control valve for maintenance work on the fire protection system which it controls, permission to shut down the affected fire protection system must be obtained from the proper authorities and all personnel who may be affected by this action must be notified.

If You Need Help

If you need technical support contact Lichfield Fire & Safety Equipment Co. Ltd. (LIFECO) at support@lifeco-uk.com.

Lichfield Fire & Safety Equipment Co. Ltd. (LIFECO) technical support is available Monday through Friday, 8:00 AM to 5:00 PM.

LIFECO