

Omega HEC-12EC

Extended Coverage Quick Response
(16'x18') (4.9m x 5.5m)

Extended Coverage (16'x20') (4.9m x 6.1m)

Horizontal Sidewall Automatic Sprinkler

Manufactured by: Central Sprinkler Company
451 North Cannon Avenue, Lansdale, Pennsylvania 19446

Product Description

The Omega Model HEC-12EC Sprinkler is the most versatile horizontal sidewall sprinkler ever produced. It is a low profile, aesthetically pleasing, wall mounted sprinkler that operates five to six times faster than a standard sprinkler. It offers a high degree of protection for human life and features a spray pattern that has been shown to be effective in the control or extinguishment of fire.

The Model HEC-12EC carries two separate Listings* by Underwriters Laboratories for use as:

1. An Extended Coverage Quick Response Sprinkler that qualifies for installation at 4"-12" (101.6mm - 304.8mm) below the ceiling in light hazard occupancies in accordance with current NFPA 13 Standards (for up to 16' x 18' (4.9 mm - 5.5 mm) coverages).
2. An Extended Coverage Sprinkler that qualifies for installation 4"-6" (101.6mm - 152.4mm) below the ceiling in light hazard occupancies in accordance with current NFPA 13 Standards (for up to 16' x 20' (4.9 mm - 6.1 mm) coverages).

The Model HEC-12EC is available in two standard finishes, brass and chrome plated. Its mating escutcheon plate is available in three standard finishes, brass, chrome plated, and

white, with additional special finishes available upon request.

Operation: A fusible alloy pellet is compressed with a bearing disc into a copper housing by a ball plunger. Heat is absorbed by the heat collecting fins and conducted to the alloy pellet. At the rated temperature the alloy melts, causing the ball plunger to drop, freeing balls from the retaining groove. This movement allows system water pressure to force the orifice sealing mechanism and deflector assembly open. Water is then discharged in a designed flow pattern.



Technical Data

Model: HEC-12EC

Style: Horizontal Sidewall

Orifice Size: 1/2" (12.7 mm)

K Factor: 5.6 (80.1 metric)

Thread Size: 1/2" (15 mm) N.P.T.

Temperature Rating:

145°F/63°C - Extended Coverage Quick Response (ECQR)

160°F/71°C - Extended Coverage Quick Response, Extended Coverage (ECQR) (EC)

Approvals: U.L., U.L.C., MEA
(Cal. No. 375-75-SA)

Maximum Working Pressure:
175 psi (12.1 bar)

Factory Hydro Test: 100% at
500 psi (34.5 bar)



1/2" (12.7mm) Orifice Horizontal Sidewall Automatic Sprinkler

Standard Finishes:

Sprinkler: brass, chrome plated
and white painted

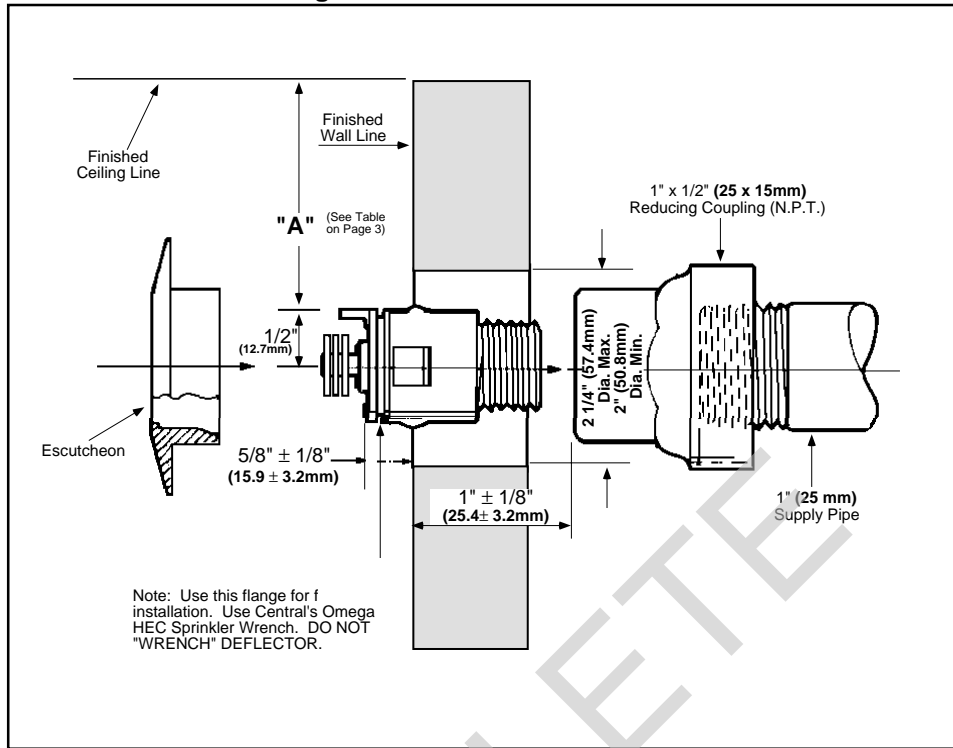
Escutcheon: brass, chrome
plated and white
painted

Length: 2 3/8" (60.3 mm)

Width: 1 3/8" (34.9 mm)

Weight: 4.5 oz. (127.6 g)

Figure 1
Omega HEC-12EC Horizontal Sidewall



Omega HEC Sprinkler Wrench





Design Data

Design Requirements — Extended Coverage Quick Response Applications

Coverage Area Width Throw	Minimum Flow (pressure)	"A" Deflector Distance Below Ceiling	Temperature Rating
16' x 16' (4.9m) (4.9m)	26 gpm (21.6 psi) 98.5 Lpm (1.5 bar)	4" - 12" (101.6 - 304.8 mm)	145°F/63°C; 160°F/71°C
16' x 18' (4.9m) (5.5m)	29 gpm (26.8 psi) 109.9 Lpm (1.8 bar)	4" - 6" (101.6 - 152.4 mm)	145°F/63°C
16' x 18' (4.9m) (5.5m)	30 gpm (28.7 psi) 113.7 Lpm (2.0 bar)	4" - 12" (101.6 - 304.8 mm)	145°F/63°C

In Extended Coverage Quick Response Applications, the Model HEC-12EC Sprinklers are listed for installation in light hazard occupancies only.

Design Requirements — Extended Coverage Applications

Coverage Area Width Throw	Minimum Flow (pressure)	"A" Deflector Distance Below Ceiling	Temperature Rating
16' x 16' (4.9m) (4.9m)	29 gpm (26.8 psi) 109.9 Lpm (1.8 bar)	4" - 6" (101.6 - 152.4 mm)	160°F/71°C
16' x 18' (4.9m) (5.5m)	30 gpm (28.7 psi) 113.7 Lpm (2.0 bar)	4" - 12" (101.6 - 304.8 mm)	160°F/71°C
16' x 20' (4.9m) (6.1m)	32 gpm (32.7 psi) 121.3 Lpm (2.3 bar)	4" - 6" (101.6 - 152.4 mm)	160°F/71°C

In Extended Coverage Applications, the Model HEC-12EC Sprinklers are listed for installation in light hazard occupancies only.

Step 4. Hand tighten the sprinkler into the fitting. Use an Omega HEC sprinkler wrench to tighten the assembly into the fitting. A leak tight joint requires the application of only 7-14 ft.-lbs. (9.5 to 19.0 Nm) of torque. A tangential force of 14-28 lbs. (62.3 to 124.5 N) delivered through a 6" (150 mm) long ratchet handle will deliver adequate torque. Torque levels over 21 ft.-lbs (28.6 Nm) may distort the orifice seal, resulting in leakage.

Step 5. To install the escutcheon plate, align it with and press it over the sprinkler body until the outer edge of the escutcheon meets the mounting surface.

Do not over or under tighten the sprinkler to compensate for inaccurate escutcheon plate adjustment.

Caution: Special care must be taken when installing with a CPVC system. Sprinklers must be installed after the CPVC manufacturer's recommended setting time for the primer and cement to ensure that neither accumulate within the sprinkler.

Special care must be taken when installing with a copper system. Sprinklers must be installed only after the inside of the sprinkler nipple and associated fittings have been wire brushed to remove any flux. Residual flux can cause corrosion and in extreme cases can impair proper sprinkler operation.



Installation

In the event of a thread leak, remove the unit, apply new pipe joint compound or tape, and reinstall.

Installation Sequence

Model HEC-12EC Sprinklers must be installed in accordance with current NFPA 13 Standards. Deviations from these requirements and standards or any alteration to the sprinkler itself will void any warranty made by Central Sprinkler Company. In addition, installation must also meet local government provisions, codes, and standards as applicable.

The system piping must be properly sized to insure the minimum required flow rate from the sprinkler.

Prior to installation, check for proper model, style, orifice size, and temperature rating. Install sprinklers after the piping is in place to avoid mechanical damage; replace any damaged unit. Wet pipe systems must be protected from freezing.

Upon completion of the installation, the system must be tested per recognized standards.

Step 1. The unit must be installed in the horizontal position.

Step 2. The face of the sprinkler fitting should be installed 5/8" ± 1/8" (15.9 mm ± 3.2 mm) behind the finished wall line. Adjustments are made via the adjustable sliding escutcheon plate to compensate for variations in the fittings.

Do not use the escutcheon plate to hold the unit in position. The sprinkler will function properly, only when the system piping is anchored to the building structure. Otherwise, reaction forces from system initiation could alter the sprinkler alignment and disrupt the distribution pattern.

Step 3. Use only a non-hardening pipe joint compound or Teflon* tape. Apply to the male threads only.

* Teflon is a trademark of the DuPont Corp.



Care & Maintenance

Sprinklers must be handled carefully. They must not be transported or stored where ambient temperatures may exceed 100°F/38°C. For best results, store them in a cool, dry location in the original shipping package.

Do not install sprinklers that have been dropped or visibly damaged. Sprinklers must never be painted, coated, plated, or altered in any other way from manufactured condition or they may not function properly. Any

sprinklers altered in such manner must be replaced.

The owner is responsible for the proper working condition of all fire protection devices and accessories. The NFPA Standard 25 entitled, "Inspection, Testing and Maintenance of Water-Based Fire Protection Systems", contains guidelines and minimum maintenance requirements. Furthermore, the local Authority Having Jurisdiction may have additional regulations and requirements for maintenance, testing, and inspection that must be obeyed.

It is advisable to have sprinkler systems inspected regularly by a qualified inspection service. Length of time between such inspections can vary due to accessibility, ambient atmosphere, water supply, and site activity.

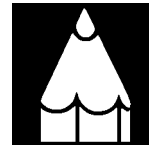
Do not attempt to re-assemble or otherwise reuse a sprinkler that has operated. Replace any sprinkler exhibiting corrosion or damage; always use new sprinklers of the same type and temperature rating as replacements.

Because the discharge pattern is critical to protection of life and property, nothing should be hung or attached to the sprinkler unit that would disrupt the pattern. Such obstructions must be removed. In the event that construction has altered the original configuration, additional sprinklers may need to be installed to maintain the protection level.

Do not attempt to replace sprinklers without first removing the fire protection system from service. Be certain to secure permission from all Authorities Having Jurisdiction, and notify all personnel who may be affected during system shutdown. A fire watch during maintenance periods is a recommended precaution.

To remove the system from service mode, first refer to the system operating guide and valve instructions. Drain water and relieve pressure in the pipes. Remove the existing unit and install the replacement, using only the recommended sprinkler wrench. Be certain to match model, style, orifice, and temperature rating.

Guarantee: Central Sprinkler Company will repair and/or replace any product found to be defective in material or workmanship within a period of one year from date of shipment. Please refer to the current Price List for further details of the warranty.



Ordering Information

When placing an order, indicate the full product name. Please specify the quantity, model, style, orifice size, temperature rating, type of finish, escutcheon plate finish, and sprinkler wrench.

For special painted escutcheon finishes, the customer must provide quick-drying or lacquer-base paint to ensure proper color duplication. Without such a guide, Central Sprinkler Company cannot be responsible for acceptable color matching.

Availability and Service: Central sprinklers, valves, accessories, and other products are available throughout the U.S. and Canada, and internationally, through a network of Central Sprinkler distribution centers. You may write directly to Central Sprinkler Company or call 215-362-0700 for the distributor nearest you.

Conversion Table:

1 inch	= 25.400 mm
1 foot	= 0.3048 m
1 pound	= 0.4536 kg
1 foot pound	= 1.36 Nm
1 psi	= 6.895 Kpa
	= 0.0689 bar
	= 0.0703 kg/cm ²
1 U.S. gallon	= 3.785 dm ³
	= 3.785 liters

Conversions are approximate.



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