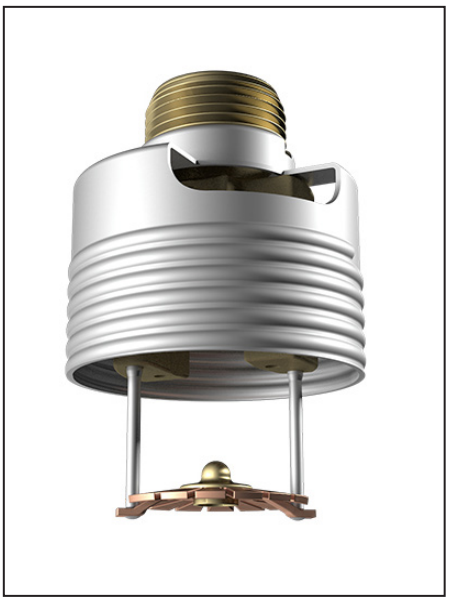
Technical Data Sheet: MX8634 (K8.0) Extended Coverage Quick Response Concealed Pendent Sprinkler

1. DESCRIPTION

The Quick Response Extended Coverage Concealed Pendent Sprinkler MX8634 is a thermosensitive glass-bulb spray sprinkler designed for installation on concealed pipe systems where the appearance of a smooth ceiling is desired. The glass bulb operating element and special deflector characteristics meet the challenges of quick response extended coverage standards.

The sprinkler is pre-assembled with a threaded adapter for installation with a low-profile cover assembly that provides up to ½" (13 mm) of vertical adjustment. The two-piece design allows installation and testing of the sprinkler prior to installation of the cover plate. The "push-on", "thread-off" design of the concealed cover plate assembly allows easy installation of the cover plate after the system has been tested and the ceiling finish has been applied. The cover assembly can be removed and reinstalled, allowing temporary removal of ceiling panels without taking the sprinkler system out of service or removing the sprinkler.



WARNING: Cancer and Reproductive Harm- www.P65Warnings.ca.gov

For Light Hazard Occupancies only.

2. LISTINGS AND APPROVALS

c UL us **cULus Listed:** Category VNIV

* Refer the Approval Chart and Design Criteria for cULus Listing requirements that must be followed.

3. TECHNICAL DATA

Specifications:
Minimum Operating Pressure: 7 psi (0.5 bar)
Maximum Working Pressure: 175 psi (12 Bar).
Factory tested hydrostatically to 500 psi (34.5 bar)
Thread sizes: 3/4" (20 mm) NPT
Nominal K-Factor: 8.0 U.S. (115.2 metric**)
Glass-bulb fluid temperature rated to -65 °F (-55 °C)
Patents Pending

**Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

Material Standards - Sprinkler:
Sprinkler Body: Brass UNS-C84400
Deflector: Copper UNS-C19500
Deflector Pins: Stainless Steel Alloy
Bulb: Glass, nominal 3 mm diameter
Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400
Button: Brass UNS-C36000
Screws: 18-8 Stainless Steel
Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape
Yoke: Phosphor Bronze UNS-C51000
Cover Adapter: Cold Rolled Steel UNS-G10080, Finish: Clear Chromate over Zinc Plating

Cover Assembly Materials:
Cover: Copper UNS-C11000
Base: Brass UNS-C26000 or UNS-C26800
Springs: Nickel Alloy
Solder: Eutectic

Available Temperature Ratings:

Temperature	135 °F (57 °C)	155 °F (68 °C)	175 °F (79 °C)	200 °F (93 °C)
Suffix	A	B	D	E

Ordering Information: Sprinkler Assembly and Cover Plate must be ordered separately. Refer to Tables 1 and 2.

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, the heat-sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the pip cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

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6. INSPECTIONS, TESTS, AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

The Model MX8634 Sprinkler is available through a network of domestic and international distributors. See the web site for the closest distributor or contact us.

8. GUARANTEE

For details of warranty, refer to the current list price schedule or contact us directly.

TABLE 1: SPRINKLER ORDERING INFORMATION
Instructions: Using the sprinkler base part number, (1) add the suffix for the desired Temperature Rating. The cover plate must be ordered separately - see Table 2.

SIN	Sprinkler Base Part No.	Size NPT Inch	Temperature Classification	1: Temperature Ratings			
				Nominal Rating	Bulb Color	Max. Ambient Ceiling Temperature[2]	Suffix
MX8634	61348A	3/4	Ordinary	135 °F (57 °C)	Orange	100 °F (38 °C)	A
			Ordinary	155 °F (68 °C)	Red	100 °F (38 °C)	B
			Intermediate	175 °F (79 °C)	Yellow	150 °F (65 °C)	D
			Intermediate	200 °F (93 °C)	Green	150 °F (65 °C)	E
			Example: 61348AE = MX8634, 200 °F (93 °C) Temperature Rated Sprinkler.				

Accessories

Sprinkler Wrenches (see Figure 1):
A. Heavy Duty Wrench Part Number: 14047WB[3]
B. Head Cabinet Wrench Part Number: 14031
Sprinkler Cabinet:
Part number 61414.

Footnotes

1. Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.
2. Based on NFPA 13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
3. Requires a 1/2" ratchet which is not available from us.

TABLE 2: COVER PLATE ORDERING INFORMATION
Instructions: Using the cover plate base part number, (1) add the suffix for the desired Finish (2) add the suffix for the required Cover Plate Nominal Rating.

Cover Plate Base Part Number[4]	Size Inch (mm)	Style	1: Finishes		Temperature Rating Matrix[1,2]			
			Description	Suffix[5]	Cover Plate Nominal Rating (Required)	Sprinkler Nominal Rating	Sprinkler Max. Ambient Ceiling Temperature[2,3]	Suffix
61365	2-3/4 (70)	Round	Polished Chrome	F	135 °F (57 °C)	135 °F (57 °C)	100 °F (38 °C)	A
61366	3-5/16 (84)	Round	Brushed Chrome	F-B	135 °F (57 °C)	155 °F (68 °C)	100 °F (38 °C)	A
61367	3-5/16 (84)	Square	Bright Brass	B	165 °F (74 °C)	175 °F (79 °C)	150 °F (65 °C)	C
			Antique Brass	B-A	165 °F (74 °C)	200 °F (93 °C)	150 °F (65 °C)	C
			Brushed Brass	B-B	**Example: 61365FC = 165 °F (74 °C) Temperature Rated 2-3/4" (70 mm) Diameter Round Cover Plate with a Polished Chrome Finish.**			
			Brushed Copper	E-B				
			Painted White	M-W				
			Painted Ivory	M-I				
			Painted Black	M-B				

Footnotes

1. The sprinkler temperature rating is stamped on the deflector.
2. Based on NFPA-13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
3. Maximum ambient temperature for cover assembly is 150 °F (65 °C).
4. Part number shown is the base part number. For complete part number, refer to current our price list schedule.
5. Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.

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Approval Chart

Quick Response Extended Coverage Concealed Pendent Sprinkler MX8634
For Light Hazard Occupancies Only.
Maximum 175 PSI (12 Bar) WWP

Sprinkler Temperature Rating
Cover Plate Temperature Rating
AW1 ← Cover Plate Finish **KEY**

Sprinkler Base Part Number[1]	SIN	Thread Size	Nominal K-Factor		Maximum Areas of Coverage[4]	Minimum Water Supply Requirements[4] Flow/Pressure	Listings and Approvals[3] (Refer also to Design Criteria.)
		NPT Inch	U.S.	metric[2]			cULus[5]
61348A	MX8634	3/4	8.0	115.2	16' x 16' (4.9 m x 4.9 m)	26 gpm @ 10.6 psi (98.4 L/min @ 0.73 Bar)	AW1, BX1
			8.0	115.2	18' x 18' (5.5 m x 5.5 m)	33 gpm @ 17.0 psi (124.9 L/min @ 1.17 Bar)	AW1, BX1
			8.0	115.2	20' x 20' (6.1 m x 6.1 m)	40 gpm @ 25.0 psi (151.4 L/min @ 1.72 Bar)	CW1, DX1

Sprinkler Temperature Ratings
A - 135 °F (57 °C) and 155 °F (68 °C)
B - 175 °F (79 °C) and 200 °F (93 °C)
C - 135 °F (57 °C)
D - 175 °F (79 °C)

Cover Plate Temperature Ratings[6]
W - 135 °F (57 °C) cover 61365, 61366[1] (large diameter), or 61367[1] (square cover plate)
X - 165 °F (74 °C) cover 61365[1], 61366[1] (large diameter)

Cover Plate Finishes[7]
1 - Polished Chrome, Brushed Chrome, Bright Brass, Antique Brass, Brushed Brass, Brushed Copper, Painted White, Painted Ivory, and Painted Black

Footnotes

1. Part number shown is the base part number. For complete part number, refer to current price list schedule.
2. Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.
3. This chart shows the listings and approvals available at the time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals.
4. For areas of coverage smaller than shown, use the "Minimum Water Supply Requirement" for the next larger area listed. Flows and pressures listed are per sprinkler.
5. Listed by Underwriter's Laboratories, Inc. for use in the U.S. and Canada for Light Hazard occupancies with smooth, flat, horizontal ceilings only.
6. The 135 °F (57 °C) cover has an orange label. The 165 °F (74 °C) cover has a white label.
7. Painted finish consists of Polyester Baked Enamel. Other paint colors are available on request with the same listings as the standard paint colors. Listings and approvals apply for any paint manufacturer. Contact Minimax Fire Protection for additional information.

NOTE: Custom colors are indicated on a label inside the cover assembly. Refer to Figure 1.

Design Criteria

(Also refer to the Approval Chart.)

cULus Listing Requirements: Quick Response Extended Coverage Concealed Pendent Sprinkler MX8634 is cULus Listed for installation in accordance with the latest edition of NFPA 13 for extended coverage pendent spray sprinklers:

- Limited to Light Hazard occupancies, with smooth, flat, horizontal ceilings only.
- Minimum spacing allowed is 8 ft. (2.4 m) unless baffles are installed in accordance with NFPA 13.
- Minimum distance from walls is 4 in. (102 mm).
- Maximum distance from walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler installation and obstruction rules contained in NFPA 13 for extended coverage pendent spray sprinklers must be followed.

NOTE: Concealed sprinklers must be installed in neutral or negative pressure plenums only.

IMPORTANT: Always refer to Form No. FX_091699 - Care and Handling of Sprinklers. Also refer to Form No. FX_080614 for general care, installation, and maintenance information. Minimax Fire Protection sprinklers are to be installed in accordance with the latest edition of Minimax Fire Protection technical data, the appropriate standards of NFPA, FM Global or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

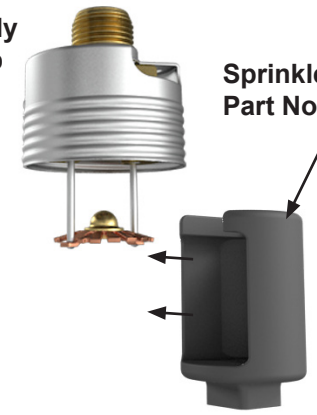
All custom color painted cover plates will have an identifying label affixed to the inside of the cover that indicates the custom color and will have a representative sample (a paint dot) of the paint on the label.

Figure 1: Identification of Custom Paint for Concealed Covers

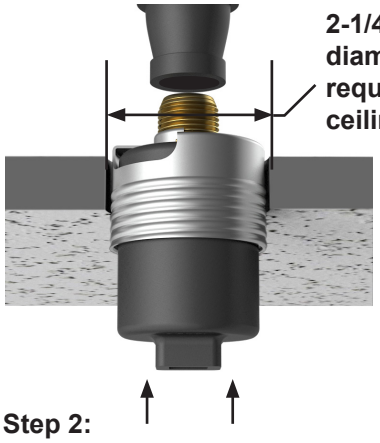
3-5/16" (84 mm)

Figure 2: Square Cover Assembly 61367

Sprinkler and Adapter Assembly
- Protective cap removed
- Use wrench 14047WB**



Step 1:
Carefully slide the wrench sideways around the deflector and pins



Step 2:
Carefully press the wrench upward and turn slightly to ensure engagement with the sprinkler wrench flats.

NEVER install the sprinkler by applying the installation wrench across the frame arms. DO NOT overtighten. Use only the designated sprinkler wrenches, Part Numbers 14047WB or 14031**. A leak-tight seal should be achieved by turning the sprinkler clockwise 1 to 1-1/2 turns beyond finger tight.**

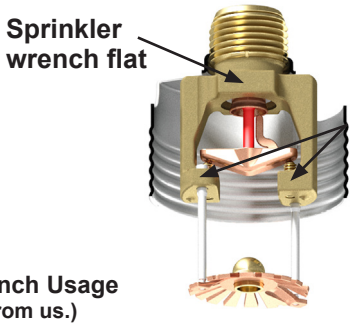
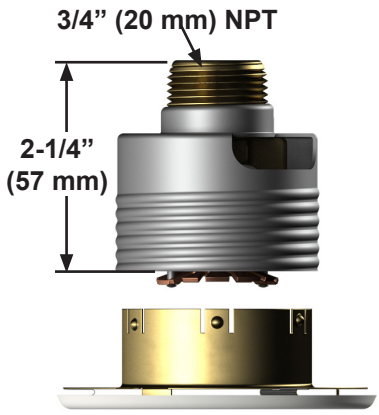
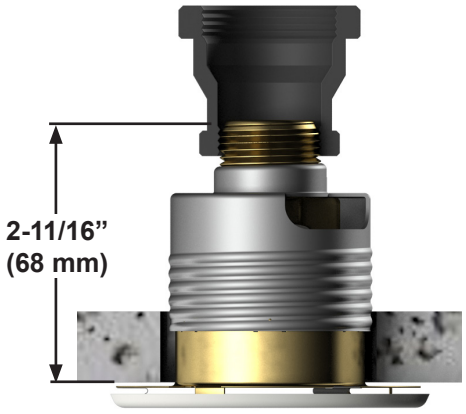
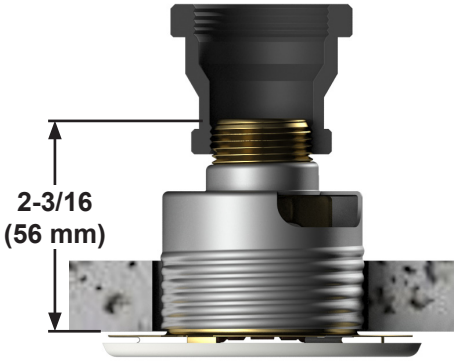


Figure 3: Sprinkler Installation and Proper Wrench Usage
** A 1/2" ratchet is required (Not available from us.)







NOTE: ***Upon sprinkler activation, the deflector descends to approximately 13/16" (21 mm) below the sprinkler body.***

Figure 4: Sprinkler Dimensions and Cover Installation

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