

## Technical Data Sheet: MX8194 Quick Response Concealed Dry Pendent Sprinkler K5.6

### 1. DESCRIPTION

Quick Response Concealed Dry Pendent sprinklers are thermosensitive spray sprinklers suitable for use in areas subject to freezing. The sprinklers are designed for dry systems and preaction systems where it is necessary to prevent water or condensation from entering the drop nipple before sprinkler operation. They may also be installed in spaces subject to freezing and supplied from a wet system in an adjacent heated area.

The dry concealed sprinkler is pre-assembled with a threaded adapter for installation with the domed cover that provides up to ½" (13 mm) of vertical adjustment. The push-on, thread-off cover slips on from below the ceiling to allow installation of the sprinkler prior to ceiling construction.

The Quick Response Dry Concealed Pendent Sprinklers are available in various finishes and temperature ratings to meet design requirements.

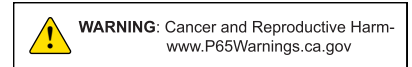


### 2. LISTINGS AND APPROVALS

cUL<sub>US</sub> Listed: Category VNIV

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

**NOTE: Dry concealed sprinklers are NOT for use in freezers or with the dry sprinkler seal.**



### 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 size: 1" (25 mm) NPT

Nominal K-Factor: 5.6 U.S. (80.6 metric\*\*) for all listed and approved lengths.

Glass-bulb fluid temperature rated to -65 °F (-55 °C)

Covered by the following U.S. Patents: 8,636,075

\*\*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:

Frame Casting: Brass UNS-C84400

Deflector: Brass UNS-C26000

Bulb: Glass, nominal 3 mm diameter

Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape

Compression Screw: Brass UNS-C36000

Pip Cap: Brass UNS-C31600, or Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

Orifice: Copper UNS-C22000

Tube: ERW Hydraulic Steel Tube

Support (Internal): Stainless Steel UNS-S30400

Barrel: Steel Pipe UNS-G10260, Electrodeposited Epoxy Base finish

Barrel End and Threads: QM Brass

Cover Adapter: Cold Rolled Steel UNS-G10080, Finish: Clear Chromate over Zinc Plating

#### Cover Assembly Materials:

Cover Plate Assembly: Copper UNS-C11000 and Brass UNS-C26800

Spring: Beryllium Nickel

Solder: Eutectic

#### Available Finishes and Temperature Ratings:

Finish	Brass	--	--
Suffix	A	--	--
Temperature	155 °F (68 °C)	175 °F (79 °C)	200 °F (93 °C)
Suffix	B	D	E

Ordering Information: (Refer to Table 1.)

### 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.

**6. INSPECTIONS, TESTS, AND MAINTENANCE**

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

**7. AVAILABILITY**

The Model MX8194 Sprinkler is available through a network of domestic and international distributors. See the web site for the closest distributor or contact us.

**8. GUARANTEE**

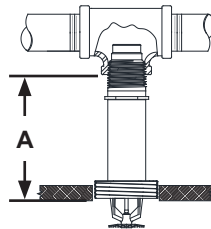
For details of warranty, refer to the current list price schedule or contact us directly.

**TABLE 1: ORDERING INFORMATION**  
 Instructions: Using the sprinkler base part number,  
 (1) add the suffix for the desired Finish  
 (2) add the suffix for the desired Temperature Rating.  
 (3) Add the "A" Dimension

Model	Sprinkler Base Part No.	Style	Thread Size	1: Finishes		2: Temperature Ratings			
			NPT Inch	Description	Suffix	Nominal Rating <sup>4</sup>	Bulb Color	Max. Ambient Ceiling Temperature <sup>1</sup>	Suffix
MX8194	61265	Concealed	1	Brass	A	155 °F (68 °C)	Red	100 °F (38 °C)	B
						175 °F (79 °C)	Yellow	150 °F (65 °C)	D
						200 °F (93 °C)	Green	150 °F (65 °C)	E

**3. "A" Dimension**

Limit<sup>3</sup>  
 Adj. Recessed: 4" to 48-1/4" (102-1226 mm)



The "A" Dimension is the distance as measured from the face of the fitting in which the sprinkler will be installed to the face of the finished ceiling in the protected area  
 ROUNDED TO THE NEAREST 1/4" (6 MM) INCREMENT.

See Figure 4 for adjustments and more information.

**Example:** 61265AB12 is a MX8194 with a Chrome finish and a 155° F (68° C) temperature rating with "A" dimension of 12 inches. This sprinkler is to be installed into an area with a maximum ambient temperature of 100 °F (38 °C) meaning if the area will experience temperatures above the maximum ambient rating, you shall use a higher temperature-rated sprinkler.

**Accessories**

**Sprinkler Wrenches (See Figure 1):**

Socket Wrench for Recessed Sprinklers: 07565WB<sup>2</sup>

**Footnotes**

1. Based on NFPA 13 Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
2. Requires a 1/2" ratchet; not available from us.
3. Custom orders for lengths exceeding the limits shown above are available, with NO APPROVALS and on a made-to-order basis up to 65-1/4" (1657 mm).

**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.

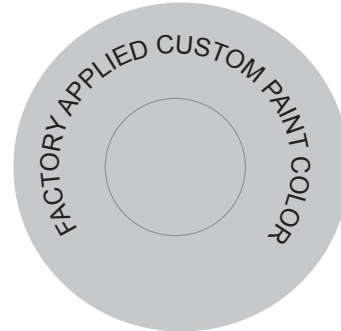
Cover Plate Base Part Number <sup>4</sup>	Size Inch (mm)	Style	1: Finishes		Temperature Rating Matrix <sup>1,2</sup>			
			Description	Suffix <sup>5</sup>	Cover Plate Nominal Rating (Required)	Sprinkler Nominal Rating	Sprinkler Max. Ambient Ceiling Temperature <sup>2,3</sup>	Suffix
61370	3-1/8 (80)	Domed	Polished Chrome	F	135 °F (57 °C)	155 °F (68 °C)	100 °F (38 °C)	A
			Bright Brass	B	165 °F (74 °C)	175 °F (79 °C)	150 °F (65 °C)	C
			Painted White	M-W	165 °F (74 °C)	200 °F (93 °C)	150 °F (65 °C)	C
			Painted Ivory	M-I	<b>Example: 61370MAW =                      135 °F (57 °C) Temperature Rated Cover                      Plate with a Painted White finish.</b>			
			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.



**Figure 1: Sprinkler Wrench**



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 2: Identification of Custom Paint for Concealed Covers**

## Approval Chart

**Quick Response Dry Concealed Pendent Sprinkler MX8194**  
**Maximum 175 PSI (12 bar) WWP**

Temperature	<b>KEY</b>
Finish	
A1X ← Escutcheon (if applicable)	

Sprinkler Base Part Number <sup>1</sup>	SIN	Thread Size	Nominal K-Factor <sup>2</sup>		Order Length Increment		Listings and Approvals <sup>4</sup> <small>(Refer also to Design Criteria)</small>
		NPT Inches	U.S.	metric <sup>3</sup>	Inches	mm	cULus <sup>5</sup>
61265	MX8194	1	5.6	80.6	1/4"	6	AW1, BX1
<b>Sprinkler Temperature Ratings</b>			<b>Cover Plate Temperature Ratings</b>			<b>Cover Plate Finishes</b>	
A - 155 °F (68 °C) B - 175 °F (79 °C) and 200 °F (93 °C)			W - 135 °F (57 °C) X - 165 °F (74 °C)			1 - Polished Chrome, Painted White, Painted Ivory, and Painted Black <sup>6</sup>	

### Footnotes

1. Part number shown is the base part number. For complete part number, refer to current price list schedule.
2. K-Factor applies for standard lengths ("A" Dimensions indicated above).
3. 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.
4. 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.
5. Listed by Underwriter's Laboratories for use in the U.S. and Canada.
6. Other paint colors are available on request with the same listings as the standard finish colors. Listings and approvals apply for any paint manufacturer. Contact Minimax Fire Protection for additional information. Custom colors are indicated on a label inside the cover assembly. Refer to Figure 3.

## Design Criteria 1 - UL

(Also refer to Approval Chart 1 above.)

**NOTE: When using CPVC fittings with Minimax Fire Protection dry sprinklers, use only new Nibco Model 5012-S-BI tees. When selecting other CPVC fittings, contact Minimax Fire Protection.**

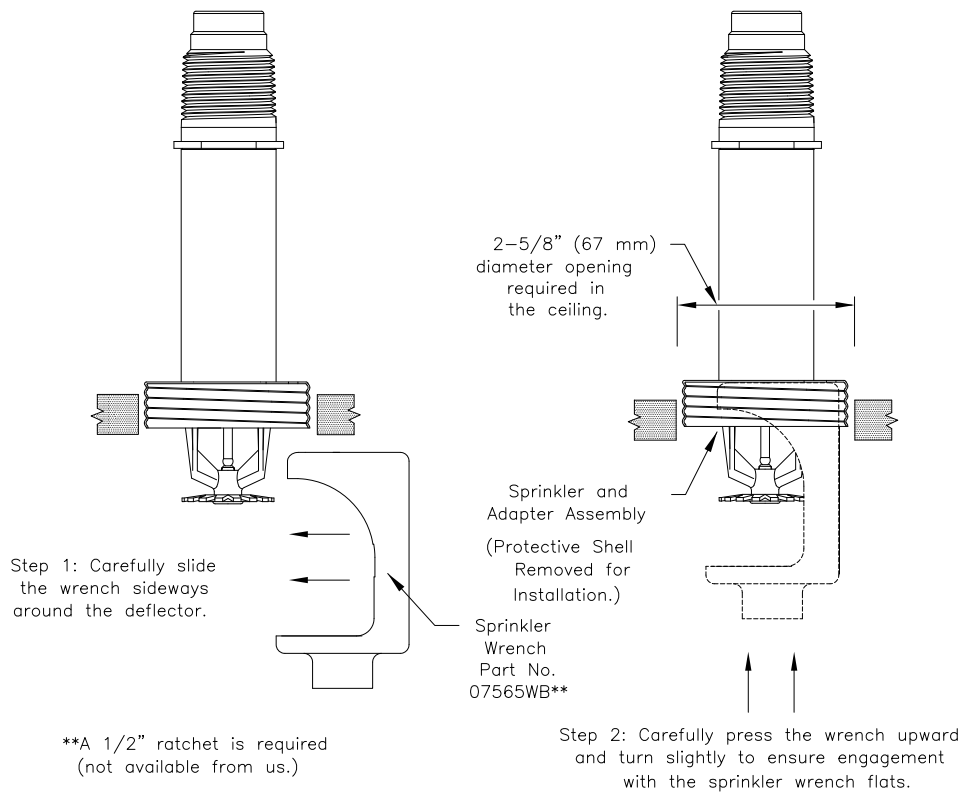
### cULus Listing Requirements:

- Quick Response Dry Pendent Sprinklers are cULus Listed as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13 for standard spray pendent sprinklers.
- Designed for use in Light and Ordinary Hazard occupancies.
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13.
- Minimum spacing allowed is 6 ft. (1.8 m) unless baffles are installed in accordance with NFPA 13.
- Locate no less than 4" (102 mm) from walls.
- 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 standard spray pendent sprinklers must be followed.
- DEFLECTOR POSITION: Install Dry Concealed Pendent Sprinklers with the deflector 3/8" (10 mm) to 7/8" (22 mm) below the ceiling. Refer to Figure 4.

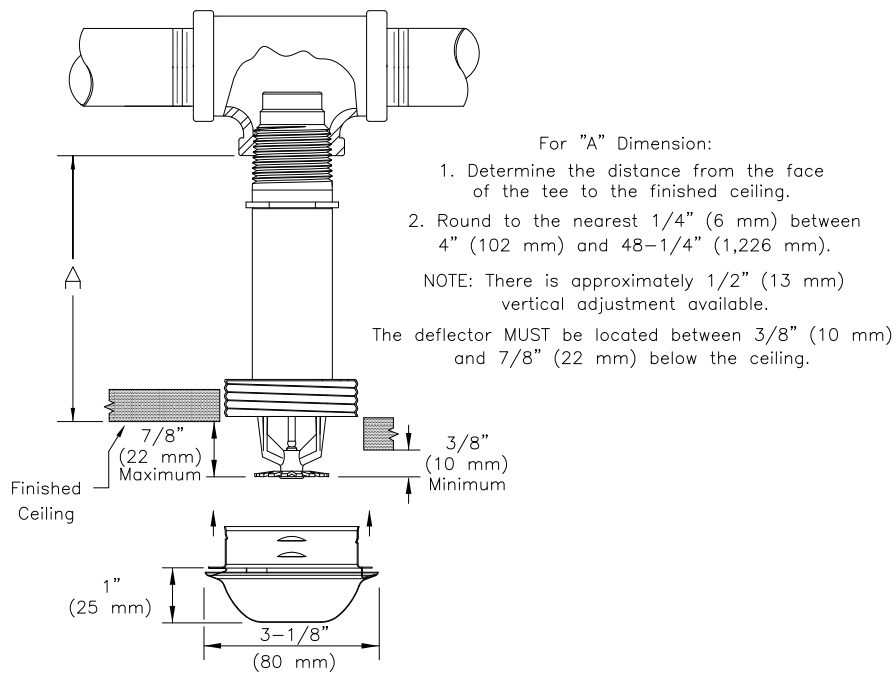
**NOTE: Concealed sprinklers must be installed in neutral or negative pressure plenums only.**

**NOTE: Dry concealed sprinklers are NOT for use in freezers or with the dry sprinkler seal.**

**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.**



**Figure 3: Sprinkler Installation and Correct Use of Sprinkler Wrench**



**Figure 4: Dry Concealed Pendent Sprinkler with up to 1/2" (13 mm) Adjustment**