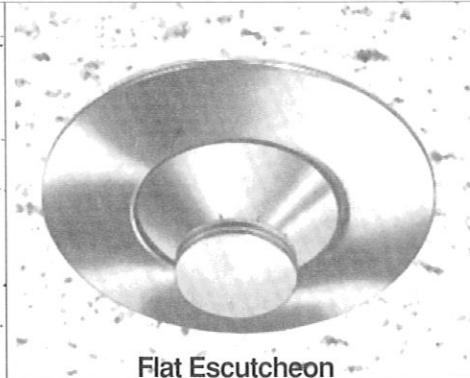


# Reliable®

**Model ZX-RES**  
**Pendent & Horizontal Sidewall**  
**Model ZX-RES/2**  
**Pendent**  
**Residential Sprinklers**



Conical Escutcheon



Flat Escutcheon



Two Piece Escutcheon

## Product Description

The Model ZX-RES and ZX-RES/2 Residential Sprinklers are fast response residential fusible solder pellet type automatic sprinklers. Residential sprinklers differ from standard sprinklers primarily in their response time and water distribution patterns.

Model ZX-RES and ZX-RES/2 Residential Sprinklers have demonstrated response times which are five times faster than standard sprinklers in laboratory tests.

The Model ZX-RES and ZX-RES/2 Pendent Residential Sprinklers discharge water in a hemispherical pattern below the sprinkler deflector. The Model ZX-RES Horizontal Sidewall Residential Sprinkler discharges water in a quarter-spherical pattern. Approximately 10% of this water is directed to the backwall and 90% is directed to the remaining three walls and floor. Residential distribution patterns are higher and generally contain finer droplets than standard sprinkler patterns.

The combination of speed of operation and high discharge pattern has demonstrated, in fire testing, an ability for controlling residential fires, thereby providing significant evacuation time for occupants.

Model ZX-RES and ZX-RES/2 Sprinklers may be installed in residential portions of any occupancy (NFPA 13), in one and two family dwellings and mobile homes (NFPA 13D), and in residential occupancies up to four stories in height (NFPA 13R).

Model ZX-RES sprinklers can be ordered with a variety of adjustable escutcheons (Figures 1. thru 5.) which all appeal to aesthetic concerns while resolving difficult ceiling and wall installations. Model ZX-RES/2 sprinklers are available with conical or flat escutcheons (Figures 1. & 2.).

## Application and Installation

Model ZX-RES and ZX-RES/2 Residential Sprinklers are UL Listed solely for use with fixed indoor wet pipe fire

protection systems. Care must be exercised that the orifice sizes, temperature ratings, and sprinkler spacings are in accordance with this bulletin, the latest published standards of National Fire Protection Association Bulletins NFPA 13D and 13R and the approving authority having jurisdiction. The maximum allowable ambient temperature is 100 degrees Fahrenheit.



Conical Escutcheon



Two Piece Escutcheon

The sprinklers must be installed with the Reliable Model ZX Pendent or Sidewall Sprinkler Wrenches. Any other type of wrench may damage the sprinkler. Also, these sprinklers are designed to allow installation with the shipping cap installed, thereby providing further sprinkler protection. Shipping caps should only be removed after ceilings and walls are finished and when the escutcheons are being installed. When the Model ZX-RES and ZX-RES/2 sprinklers are ordered, the sprinklers and escutcheons are packaged separately. Model ZX escutcheons are the only escutcheons that can be used with these sprinklers. The use of any other escutcheon will void all approvals as a residential sprinkler and negate all warranties. Also, each installed sprinkler must include one of the escutcheons for proper operation.

Use care to avoid damaging the sprinklers before, during and after installation. Inspect all installed sprinklers to insure the sensor fins and the horizontal sidewall deflector shelf have not been damaged. Refer to Figs. 4 and 5 for the correct horizontal sidewall deflector shelf

angles. Replace all sprinklers which have any sign of damage.

### Maintenance

Model ZX-RES and ZX-RES/2 Residential Sprinklers should be inspected quarterly and the sprinkler system maintained in accordance with NFPA-13A and 13D. Do not clean the sprinklers with soap and water, ammonia or other cleaning fluids. Remove any dust using a soft brush or gentle vacuuming. Remove any sprinkler which has been painted (other than factory applied) or damaged in any way. A stock of spare sprinklers should be

Standard Finishes	
Sprinkler	Escutcheon
Bright Chrome Plated	Bright Chrome Plated
Bright Chrome/Enamel Painted (1)	Satin Chrome Plated
Bright Brass Plated	Enamel Painted (1)
Black Plated	Bright Brass Plated
	Black Plated

(1) White, Off White and Black are standard colors.

## Model ZX-RES Pendent Residential Sprinkler

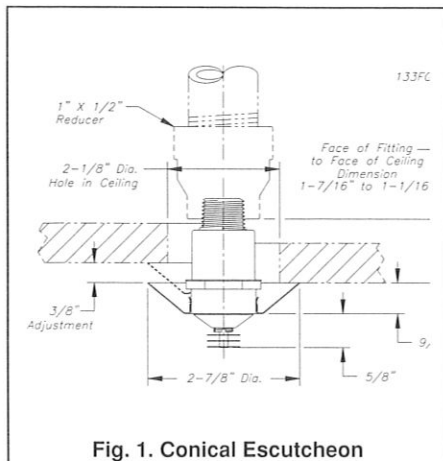


Fig. 1. Conical Escutcheon

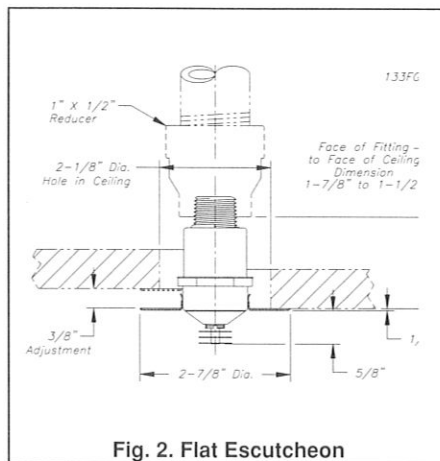


Fig. 2. Flat Escutcheon

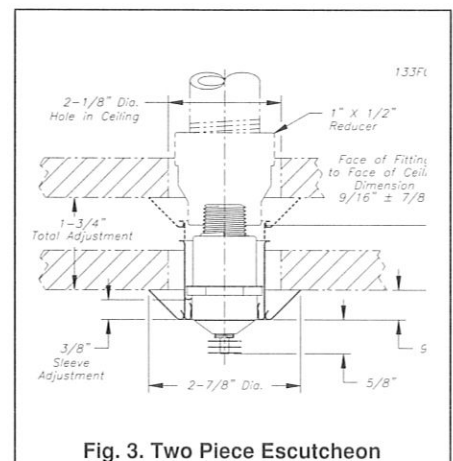


Fig. 3. Two Piece Escutcheon

### Installation Wrench

Model ZX Pendent Sprinkler Wrench

### Sprinkler Markings

RASCO PEND ZX-RES SPKR K = 5.4

RASCO PEND ZX-RES SPKR K = 4.1

### Technical Data

Thread Size: 1/2" NPT  
 Temp. Rating: 165°F (74°C)  
 Max. Pressure: 175 psig.  
 Max. Ceiling Temp.: 100°F  
 Sprinkler Height: 2 29/32 in.

### Installation Data

Nominal Orifice Size (in.)	K Factor	Sprinkler Spacing (ft.)	Maximum Distance to Wall (ft.)	Minimum Spacing between Sprinklers (ft.)	Minimum Required Sprinkler Discharge				Sprinkler Identification Number (SIN)
					Single Sprinkler		Two Or More Sprinklers		
					Flow (gpm)	Press. (psi)	Flow Ea. (gpm)	Press. Ea. (psi)	
7/16	4.1	12 x 12	6	8	18	19.3	13	10.1	R3314
7/16	4.1	14 x 14	7	8	18	19.3	13	10.1	
7/16	4.1	16 x 16	8	8	24	34.3	17	17.2	
1/2	5.4	12 x 12	6	8	26	23.2	18	11.1	R3311
1/2	5.4	14 x 14	7	8	26	23.2	18	11.1	
1/2	5.4	16 x 16	8	8	30	30.9	21	15.1	
1/2	5.4	18 x 18	9	8	32.5	36.2	23	18.1	



# Model ZX-RES/2 Pendent Residential Sprinkler

Use Conical or Flat Escutcheon, Figures 1 & 2 Only.

## Installation Wrench

Model ZX Pendent Sprinkler Wrench

## Sprinkler Markings

RASCO PEND ZX-RES/2 SPKR K = 4.1

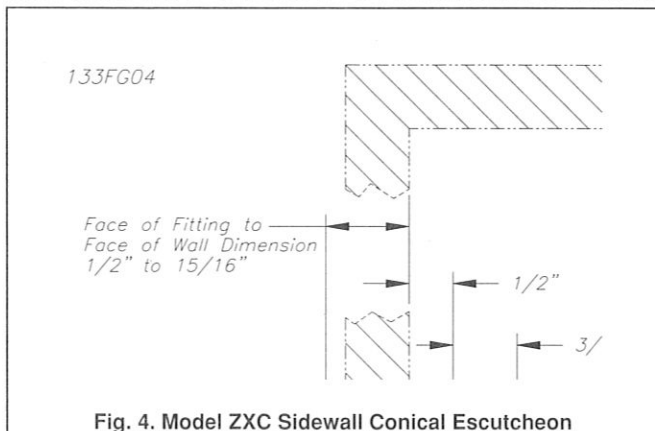
## Technical Data

Thread Size:	1/2" NPT
Temp. Rating:	165°F (74°C)
Max. Pressure:	175 psig.
Max. Ceiling Temp.:	100°F
Sprinkler Height:	2 29/32 in.

## Installation Data

Nominal Orifice Size (in.)	K Factor	Sprinkler Spacing (ft.)	Maximum Distance to Wall (ft.)	Minimum Spacing between Sprinklers (ft.)	Minimum Required Sprinkler Discharge				Sprinkler Identification Number (SIN)
					Single Sprinkler		Two Or More Sprinklers		
					Flow (gpm)	Press. (psi)	Flow Ea. (gpm)	Press. Ea. (psi)	
7/16	4.1	12 x 12	6	9	12	8.6	11	7.2	R3319
7/16	4.1	14 x 14	7	9	13	10.1	11	7.2	
7/16	4.1	16 x 16	8	9	14	11.7	12	8.6	
7/16	4.1	18 x 18	9	9	16	15.2	14	11.7	
7/16	4.1	20 x 20	10	9	18	19.3	16	15.2	

# Model ZX-RES Horizontal Sidewall Residential Sprinkler



## Installation Wrench

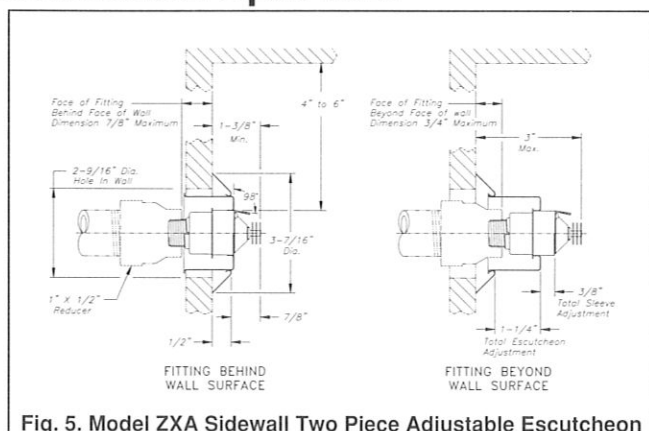
Model ZX Sidewall Sprinkler Wrench

## Sprinkler Markings

RASCO HSW ZX-RES SPKR K = 5.4

## Installation Data

Nominal Orifice Size (in.)	K Factor	Sprinkler Spacing (ft.)	Maximum Distance to Wall (ft.)	Minimum Spacing between Sprinklers (ft.)	Minimum Required Sprinkler Discharge				Sprinkler Identification Number (SIN)
					Single Sprinkler		Two Or More Sprinklers		
					Flow (gpm)	Press. (psi)	Flow Ea. (gpm)	Press. Ea. (psi)	
½	5.4	12 x 12	6	8	24	19.8	17	10.0	R3331
½	5.4	14 x 14	7	8	24	19.8	17	10.0	



## Technical Data

Thread Size:	1/2" NPT
Temp. Rating:	165°F (74°C)
Max. Pressure:	175 psig.
Max. Ceiling Temp.:	100°F
Sprinkler Length:	2 5/8 in.

## Approval Organizations

Underwriters Laboratories, Inc.  
Underwriters' Laboratories of Canada  
N.Y.C. B.S.&A. No. 587-75-SA or  
N.Y.C. MEA 258-93-E (ZX-RES/2)

## Ordering Information

Specify:

1. Model Type
2. Orifice Size
3. Escutcheon Type
4. Sprinkler Finish
5. Escutcheon Finish

## UL Listing Category

Residential Automatic Sprinklers

## UL Guide Number

VKKW

## NOTE:

Sprinklers and escutcheons are packaged separately.

# Reliable...For Complete Protection

Reliable offers a wide selection of sprinkler components. Following are some of the many precision-made Reliable products that guard life and property from fire around the clock.

- Automatic Sprinkler
- Flush automatic sprinklers
- Recessed automatic sprinklers
- Concealed automatic sprinkler
- Adjustable automatic sprinklers
- Dry automatic sprinklers
- Intermediate level sprinklers
- Open sprinklers
- Spray nozzles
- Alarm valves
- Retarding chambers
- Dry pipe valves
- Accelerators for dry pipe valves
- Mechanical sprinkler alarms
- Electrical sprinkler alarm switches
- Water flow detectors
- Deluge Valves
- Detector check valves
- Check valves
- Supertrol electrical system
- Sprinkler emergency cabinets
- Sprinkler wrenches
- Sprinkler escutcheons and guards
- Inspectors test connections
- Sight drains
- Ball drips and drum drips
- Control valve seals
- Air maintenance devices
- Air maintenance devices
- Air compressors
- Pressure gauges
- Identification signs
- Fire department connection

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The equipment presented in this bulletin is to be installed in accordance with the latest pertinent Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or there similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.

Products manufactured and distributed by Reliable have been protection life and properly for over 80 years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.

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