



TECHNICAL DATA SHEET

ESFR IN-RACK SPRINKLERS

1. DESCRIPTION AND INTENDED USE

The Model EG series guard/water shields are hard-wire cages with an integrated carbon steel plate designed to surround the sprinkler and protect it from mechanical damage as well as water spray from above. The guard/water shield is intended for areas where sprinklers are installed at a low elevation and/or near a high degree of human or mechanical activity as well as where water shielding is required. The Model ES series water shields are intended for use on pendent ESFR sprinklers to protect the sprinkler's heat sensing operating element from water spray from above.

Viking Model EG-100 Sprinkler Guards/Water Shields and Model ES-75 Water Shields are intended to be used in conjunction with ESFR style sprinklers where allowed by the approvals. (Refer to the Approval Charts). The sprinkler must be used in accordance with:

1. the sprinkler's Listings, Approvals, and associated design requirements.
2. the recognized design and installations standards issued, for example NFPA, FM, EN, VdS, or LPCB.
3. the latest revisions of all applicable manufacturer's documentation.

Governmental codes, ordinances, and standards may apply and may differ from one another.

WARNING

Cancer and Reproductive Harm www.P65Warnings.ca.gov

2. LISTING AND APPROVALS

Refer to section 5 for details and requirements that must be followed.



FM Approved: Class 2091

- EG-100 Guard/Water Shield is FM Approved for use with VK506, VK510, and VK514 sprinklers.
- ES-75 Water Shield is FM Approved for use with VK500 and VK503 sprinklers.
- The Model EG Guard/Water Shield and ES Water Shield are also FM approved for intermediate-level use, such as in-rack, under conveyors, mezzanines, or other similar obstructions. Refer to the Approval Chart.





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3. TECHNICAL SPECIFICATIONS

3.1 Materials of Construction

| Parameter | Value |
|--|--|
| EG series water shield (top plate) | JIS G314 Carbon steel |
| EG series rivet and pins | AISI 12L14 Carbon steel |
| Guard (wire) | Q235 Cold drawn steel wire |
| Screw 6-32 x 3/8 (R.H. Phillips-slotted combination drive) | Steel with Zinc plating |
| ES series water shield | 1075 steel per ASTM A684, 0.039" thick |
| In-rack ESFR sprinkler wrench | Ductile iron |

3.2 Markings and Dimensions

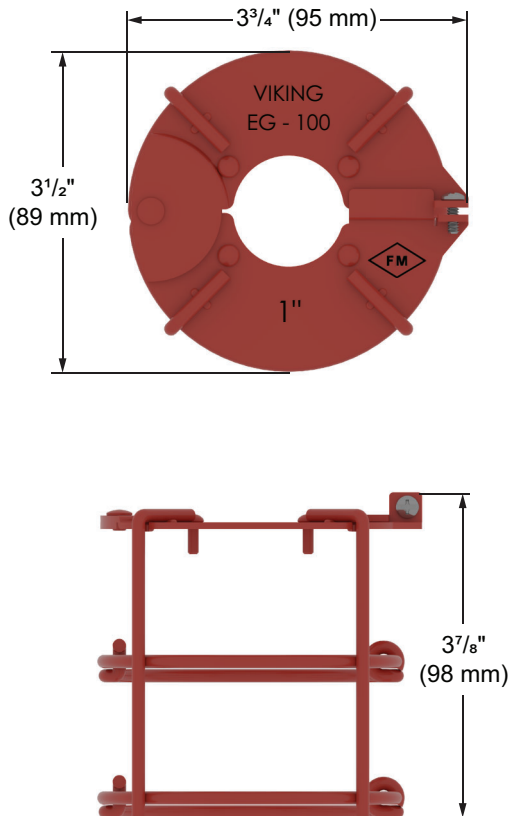


Figure – 1: EG Series Guard/Water Shield Markings and Dimensions

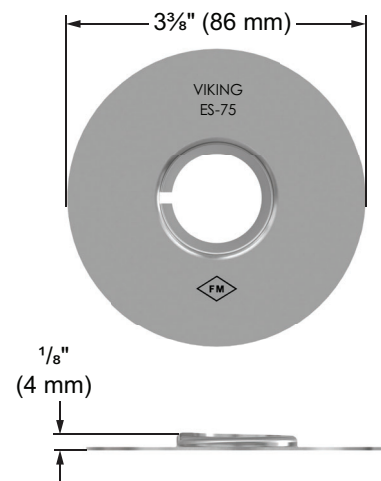


Figure – 2: ES Series Water Shield Markings and Dimensions



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4. INSTALLATION

4.1 EG-100 Guard/Shield

NOTICE

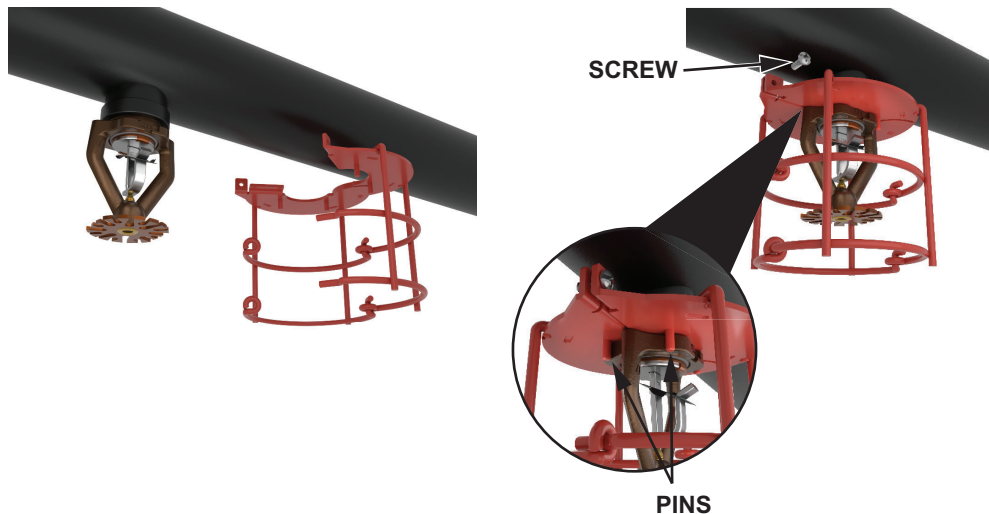
Improper installation will impeded the sprinkler operation/activation.

- Follow the procedure below to properly install the sprinkler guard/water shield.

A #2 R.H. Phillips or Flat Head screwdriver is required for installation.

1. If not already installed, install the sprinkler in the pipe fitting.
2. Loosen the screw and open the guard/water shield.
3. Place the guard/water shield around the sprinkler. Verify the sprinkler is correctly oriented inside the guard.
4. Close the guard/water shield and tighten the screw.

NOTE: Be sure the pins line up with the sprinkler frame as shown.



Improper installation will impede sprinkler operation. Ensure that the sprinkler is installed in the correct position.

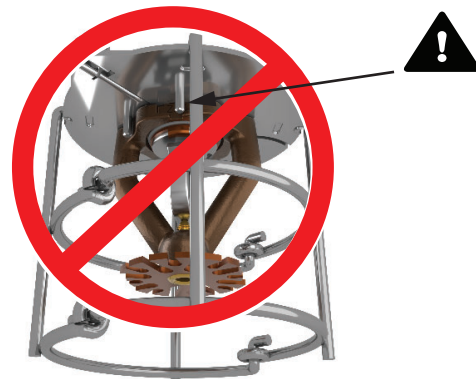


Figure – 3: Installing the EG Series Guard/Water Shield



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4.2 ES Series Water Shield

The concave surface of the water shield should face the sprinkler deflector as shown.

1. Install the water shield onto the sprinkler threads.
2. Rotate the water shield (or spin the sprinkler) until it is at the bottom of the threads.

NOTICE

DO NOT use the water shield to start or thread the sprinkler into the pipe fitting.

3. Install the sprinkler:
 - a. If the pipe fitting is standard, use the In-Rack ESFR sprinkler wrench. Slide the wrench sideways over the wrench boss.
 - b. If the pipe fitting is an InstaSeal fitting, do NOT use a sprinkler wrench. Refer to the IS-W2 Technical Data. For 3/4" NPT sprinklers, refer to F_021123. For 1" NPT sprinklers, refer to F_021223.
4. Tighten the sprinkler until the water shield is snug against the face of the fitting.



Figure – 4: Installing the ES Series Water Shield



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5. LISTINGS AND APPROVALS

| Sprinkler Identification Number (SIN) | Compatible Device | Thread Sizes | | Nominal K-factor | | FM ¹ |
|---------------------------------------|-------------------|--------------|-------|------------------|--------|-----------------|
| | | NPT | BSPT | U.S. | Metric | |
| VK500 | ES-75 | 3/4" | 20 mm | 14.0 | 202 | ✓ |
| VK503 | ES-75 | 3/4" | 20 mm | 16.8 | 242 | ✓ |
| VK506 | EG-100 | 1" | 25 mm | 22.4 | 320 | ✓ |
| VK510 | EG-100 | 1" | 25 mm | 25.2 | 363 | ✓ |
| VK514 | EG-100 | 1" | 25 mm | 28.0 | 404 | ✓ |

1. FM approved for intermediate-level use, such as in-rack, under conveyors, mezzanines, or other similar obstructions.

6. ORDERING INFORMATION

| Part Number | Descriptions | Size (NPT) | Compatible Sprinkler SINs |
|-------------|--|------------|---------------------------|
| 24988F | EG-100 ESFR Guard/Water Shield, chrome finish | 1" | VK506, VK510, VK514 |
| 24988M/R | EG-100 ESFR Guard/Water Shield, painted red | 1" | VK506, VK510, VK514 |
| 27489 | ES-75 Water Shield, chrome finish | 3/4" | VK500 and VK503 |
| 27512M/B | In-rack ESFR Sprinkler wrench, socket style, for sprinklers with ES-75 water shield (requires a 1/2" ratchet drive). | 3/4" | VK500 and VK503 |

7. CONTACT

The sprinkler and accessories are available through Viking distributors only. Contact your local Viking sales office which can be found on our website:

Americas and Asia: www.vikinggroupinc.com/locations OR Europe, Middle East, Africa (EMEA): www.viking-emea.com/contact

Manufacturer:

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