**Series LFII**  
6.9 K **Pendent & 5.8 K Horizontal Sidewall Sprinklers**  
UL Listed & FM Approved Residential Sprinklers

**Features & Benefits**
- Only FM Approved Package of Residential Sprinklers for NFPA 13 occupancies
- Larger K-Factor allows for smaller pipe sizes and lower pressure
- Optimized for NFPA 13 residential designs requiring a 0.10 density
- Available in 155°F/68°C and 175°F/79°C temperatures
- Featuring the industry’s only 10 year limited product warranty

**General Description**

The Tyco® Series LFII (TY4234) Rapid Response™ Residential Horizontal Sidewall Sprinklers and (TY4234) Rapid Response™ Residential Pendent, Recessed Pendent, and Concealed Pendent Sprinklers are decorative, fast response, frangible bulb sprinklers designed for use in residential occupancies such as homes, apartments, dormitories, and hotels. When enhanced flow characteristics for residential portions of any occupancy per NFPA 13 are the major consideration, the Series LFII (TY4234 and TY4334) should be the first choice.

When higher flow demands are required for residential sprinklers used in an NFPA 13 design, the large 5.8 K factor of the Series LFII (TY4334) and 6.9 K factor of the Series LFII (TY4234) are an attractive choice. Although primarily intended where residential sprinklers are to be used in an NFPA 13 design, the Series LFII (TY4234 and TY4334) can also be used in wet pipe residential sprinkler systems for one- and two-family dwellings and mobile homes per NFPA 13D, and wet pipe residential sprinkler systems for residential occupancies up to and including four stories in height per NFPA 13R.

**TY4234 Technical Data**

- **6.9 K-factor Residential Pendent, Recessed Pendent & Concealed Pendent Sprinklers**
- **Approvals & Listings:**
  - Pendent / Recessed Pendent: UL and C-UL Listed, FM Approved
  - Concealed Pendent: UL and C-UL Listed
- **Discharge Coefficient:**
  - K = 6.9 GPM/psi 1/2 (99.4 LPM/bar 1/2)
- **Pipe Thread Connection:** 3/4” NPT
- **Temperature Ratings:**
  - Pendent / Recessed Pendent: 155°F/68°C or 175°F/79°C
  - Concealed Pendent: 155°F/68°C (with Cover Plate 135°F/57°C) 175°F/79°C (with Cover Plate 135°F/57°C)
- **Sprinkler Component Finishes**
  - Sprinklers: White Polyester Coated, Chrome Plated, or Natural Brass
  - Recessed Escutcheon: White, Chrome, or Brass
  - Concealed Cover Plate: Flat White, Bright White, Chrome, or Custom
- **Maximum Coverage Area:** 400 ft²
  - Maximum distance between sprinklers should not exceed the length of the coverage area.

**TY4334 Technical Data**

- **5.8 K-factor Residential Horizontal Sidewall Sprinkler**
- **Approvals & Listings:** UL and C-UL Listed, FM Approved
- **Discharge Coefficient:**
  - K = 5.8 GPM/psi 1/2 (83.5 LPM/bar 1/2)
- **Pipe Thread Connection:** 1/2” NPT
- **Temperature Ratings:** 155°F (68°C) or 175°F (79°C)
- **Sprinkler Finishes:** White Polyester Coated, Chrome Plated, or Natural Brass
- **Maximum Coverage Area:**
  - Recessed: 324 ft²
  - Non-Recessed: 352 ft²
- **Maximum distance between sprinklers should not exceed the length of the coverage area.**

**Collective Technical Data**

- **Maximum Working Pressure:** 175 psi (12.1 bar)
- **Minimum Distance Between Sprinklers:** 8 ft. (2.4 m)
- **System Type:** Wet Pipe Systems Only

Always refer to the Technical Data Sheets TFP408 and TFP417 for complete description of all Listing & Approval criteria, design parameters, installation instructions, care and maintenance guidelines, and our limited warranty.

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**ORDERING PROCEDURE & SPECIFICATIONS**

### SERIES LFII

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>TY4234</th>
<th>TY4334</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal K Factor</td>
<td>6.8</td>
</tr>
<tr>
<td>Temperature</td>
<td>155°F or 175°F</td>
</tr>
<tr>
<td>(68°C or 79°C)</td>
<td>(68°C or 79°C)</td>
</tr>
<tr>
<td>Thread Size</td>
<td>3/4” NPT</td>
</tr>
</tbody>
</table>

### ORDERING PROCEDURE

**TY4234 Pendent(s) LFII 6.9K – 3/4” NPT**

- Temperature: 155°F (68°C) Brass P/N: 56-069-1-155
- Temperature: 155°F (68°C) Chrome P/N: 56-069-4-155
- Temperature: 155°F (68°C) White P/N: 56-069-9-155
- Temperature: 157°F (79°C) Brass P/N: 56-069-1-175
- Temperature: 157°F (79°C) Chrome P/N: 56-069-4-175
- Temperature: 157°F (79°C) White P/N: 56-069-9-175

**TY4234 Concealed(s) LFII 6.9K – 3/4” NPT**

- Temperature: 155°F (68°C) Brass P/N: 56-068-1-155
- Temperature: 175°F (79°C) Brass P/N: 56-068-1-175

**Cover Plates**

- Temperature: 155°F (68°C) Chrome P/N: 56-873-9-135
- Temperature: 155°F (68°C) Off White P/N: 56-873-9-135
- Temperature: 155°F (68°C) Bright White P/N: 56-873-4-135
- Temperature: 157°F (79°C) Flat White P/N: 56-873-5-135
- Temperature: 157°F (79°C) Custom P/N: 56-873-X-135

**TY4334 Sidewall LFII 5.8K – 1/2” NPT**

- Temperature: 155°F (68°C) Brass P/N: 56-064-1-155
- Temperature: 155°F (68°C) Chrome P/N: 56-064-9-155
- Temperature: 157°F (79°C) Brass P/N: 56-064-1-175
- Temperature: 157°F (79°C) Chrome P/N: 56-064-9-175

**Recessed Escutcheons**

- Style 30 Brass P/N: 56-705-2-011
- Style 30 Chrome P/N: 56-705-9-011
- Style 30 White P/N: 56-705-4-011

**TY4334 Concealed(s) LFII 5.8K – 3/4” NPT**

- Temperature: 155°F (68°C) Brass P/N: 56-000-6-387
- Temperature: 175°F (79°C) Brass P/N: 56-000-6-387

**Cover Plates**

- Temperature: 155°F (68°C) Chrome P/N: 56-873-9-135
- Temperature: 155°F (68°C) Off White P/N: 56-873-9-135
- Temperature: 155°F (68°C) Bright White P/N: 56-873-4-135
- Temperature: 157°F (79°C) Flat White P/N: 56-873-5-135
- Temperature: 157°F (79°C) Custom P/N: 56-873-X-135

**Recessed Escutcheons**

- Style 20 Brass P/N: 56-705-2-010
- Style 20 Chrome P/N: 56-705-9-010
- Style 20 White P/N: 56-705-4-010

**Sprinkler Wrench**

- W-Type 6 P/N: 56-000-6-387
- W-Type 7 P/N: 56-850-4-001

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**SX1 RULE – Hydraulic Design**

The minimum required sprinkler flow rate for systems designed to NFPA 13D or NFPA 13R are given in the TY4234 and TY4334 tables below as a function of temperature rating and the maximum allowable coverage areas. The sprinkler flow rate is the minimum required discharge from each of the total number of “design sprinklers” as specified in NFPA 13D or NFPA 13R. For systems designed to NFPA 13, the number of design sprinklers is to be the four most hydraulically demanding sprinklers. The minimum required discharge from each of the four sprinklers is to be the greater of the following:

- A minimum discharge of 0.1 gpm/sq. ft. over the “design area” comprised of the four most hydraulically demanding sprinklers for the actual coverage areas being protected by each of the four sprinklers.

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**Table A - UL & C-UL Listed Flow Chart for TY4234 - 6.9 K Pendent Sprinklers**

<table>
<thead>
<tr>
<th>Coverage Area</th>
<th>Maximum Flow</th>
<th>Residual Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft. x ft. m x m</td>
<td>GPM</td>
<td>psi/psig</td>
</tr>
<tr>
<td>12 x 12</td>
<td>19 GPM</td>
<td>7.6 psi (0.52 bar)</td>
</tr>
<tr>
<td>(3.7 x 3.7)</td>
<td>7.6 psi (0.52 bar)</td>
<td>7.6 psi (0.52 bar)</td>
</tr>
<tr>
<td>14 x 14</td>
<td>19 GPM</td>
<td>7.6 psi (0.52 bar)</td>
</tr>
<tr>
<td>(4.3 x 4.3)</td>
<td>7.6 psi (0.52 bar)</td>
<td>7.6 psi (0.52 bar)</td>
</tr>
<tr>
<td>16 x 16</td>
<td>19 GPM</td>
<td>7.6 psi (0.52 bar)</td>
</tr>
<tr>
<td>(4.9 x 4.9)</td>
<td>7.6 psi (0.52 bar)</td>
<td>7.6 psi (0.52 bar)</td>
</tr>
<tr>
<td>18 x 18</td>
<td>22 GPM</td>
<td>9.3 psi (0.64 bar)</td>
</tr>
<tr>
<td>(5.5 x 5.5)</td>
<td>7.6 psi (0.52 bar)</td>
<td>9.3 psi (0.64 bar)</td>
</tr>
<tr>
<td>20 x 20</td>
<td>22 GPM</td>
<td>12.1 psi (0.83 bar)</td>
</tr>
<tr>
<td>(6.1 x 6.1)</td>
<td>10.2 psi (0.70 bar)</td>
<td>12.1 psi (0.83 bar)</td>
</tr>
</tbody>
</table>

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**Table B - UL & C-UL Listed Flow Chart for TY4334 - 5.8 K Horizontal Sidewall Sprinkler**

<table>
<thead>
<tr>
<th>Coverage Area</th>
<th>Maximum Flow</th>
<th>Residual Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft. x ft. m x m</td>
<td>GPM</td>
<td>psi/psig</td>
</tr>
<tr>
<td>12 x 12</td>
<td>19 GPM</td>
<td>10.7 psi (0.74 bar)</td>
</tr>
<tr>
<td>(3.7 x 3.7)</td>
<td>10.7 psi (0.74 bar)</td>
<td>10.7 psi (0.74 bar)</td>
</tr>
<tr>
<td>14 x 14</td>
<td>21 GPM</td>
<td>13.1 psi (0.90 bar)</td>
</tr>
<tr>
<td>(4.3 x 4.3)</td>
<td>13.1 psi (0.90 bar)</td>
<td>13.1 psi (0.90 bar)</td>
</tr>
<tr>
<td>16 x 16</td>
<td>21 GPM</td>
<td>13.1 psi (0.90 bar)</td>
</tr>
<tr>
<td>(4.9 x 4.9)</td>
<td>13.1 psi (0.90 bar)</td>
<td>13.1 psi (0.90 bar)</td>
</tr>
<tr>
<td>18 x 18</td>
<td>23 GPM</td>
<td>15.7 psi (1.08 bar)</td>
</tr>
<tr>
<td>(4.9 x 5.5)</td>
<td>15.7 psi (1.08 bar)</td>
<td>15.7 psi (1.08 bar)</td>
</tr>
<tr>
<td>20 x 20</td>
<td>23 GPM</td>
<td>17.1 psi (1.18 bar)</td>
</tr>
<tr>
<td>(4.9 x 6.1)</td>
<td>17.1 psi (1.18 bar)</td>
<td>17.1 psi (1.18 bar)</td>
</tr>
<tr>
<td>22 x 22</td>
<td>29 GPM</td>
<td>26.8 psi (1.86 bar)</td>
</tr>
<tr>
<td>(5.5 x 5.5)</td>
<td>29 GPM (1.18 bar)</td>
<td>26.8 psi (1.86 bar)</td>
</tr>
<tr>
<td>24 x 24</td>
<td>29 GPM</td>
<td>30 GPM</td>
</tr>
<tr>
<td>(5.5 x 5.5)</td>
<td>29 GPM (1.18 bar)</td>
<td>30 GPM (1.18 bar)</td>
</tr>
</tbody>
</table>

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**Examples for TY4234:**

A corridor being protected is 8 ft. wide; consequently, an actual coverage area of 8 ft. x 20 ft. is being contemplated. Based on using the LFII (TY4234) Residential Pendant Sprinkler, the flow rate provided in Table A for a 20 ft. x 20 ft. coverage area is 22 GPM. However based on minimum discharge of 0.1 gpm/sq. ft. the flow rate would be 16 GPM. In this case a minimum flow rate of 22 GPM for this design sprinkler must be utilized.

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**Technical Services**

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