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# Pendent / Upright Sprinklers, K5.6(80)

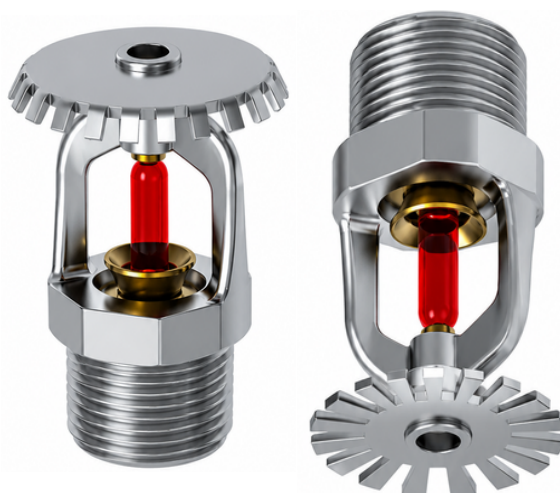
Model : BL 5601 / BL 5602 / BL 5603 / BL 5604

## Description:

The Sprinkler Models, including models BL 5601, BL 5602, BL 5603 and BL 5604, is designed in accordance with UL 199 standards. Available in both Standard Response and Quick Response configurations, these sprinklers are suitable for upright and pendent installations, with recessed installation available for pendent models using recessed escutcheon plates providing up to ¾ in. (19 mm) vertical adjustment. Featuring a K5.6 standard orifice, the series provides reliable water distribution and flexible installation for a wide range of light and ordinary hazard applications. Available in multiple temperature ratings and finish options, the series features a robust cast body and frame for dependable performance and durability in modern fire protection systems.

## Specifications :

| Model                     | Pendent BL 5601 (S.R.), BL 5602 (Q.R.),<br>Upright BL 5603 (S.R.), BL 5604 (Q.R.)   |
|---------------------------|-------------------------------------------------------------------------------------|
| K-Factor                  | 5.6 (80)                                                                            |
| Nominal Thread Size       | 1/2" NPT                                                                            |
| Maximum Tightening Torque | 21 ft-lbs (28.6 Nm)                                                                 |
| Maximum Working Pressure  | 175 PSI (12 Bar)                                                                    |
| Factory Hydrostatic Test  | 100% tested at 500 PSI (34.50 Bar)                                                  |
| Temperature Range         | 57°C - 182°C (BL 5601)<br>57°C - 141°C (BL 5602)<br>57°C - 93°C (BL 5603 / BL 5604) |



## Temperature Rating Table :

| Sprinkler<br>SIN | Temperature<br>Rating |   | NFPA Allowed<br>Maximum<br>Ambient (Ceiling)<br>Temperature | Glass<br>Bulb<br>Color |
|------------------|-----------------------|---|-------------------------------------------------------------|------------------------|
|                  | UL                    |   |                                                             |                        |
| BL 5601          | 135°F / 57°C          |   | 100°F / 38°C                                                | Orange                 |
|                  | 155°F / 68°C          |   |                                                             | Red                    |
|                  | 175°F / 79°C          |   | 150°F / 65°C                                                | Yellow                 |
|                  | 200°F / 93°C          |   |                                                             | Green                  |
|                  | 286°F / 141°C         | - | 225°F / 107°C                                               | Blue                   |
|                  | 360°F / 182°C         | - | 300°F / 149°C                                               | Mauve                  |
| BL 5602          | 135°F / 57°C          | - | 100°F / 38°C                                                | Orange                 |
|                  | 155°F / 68°C          |   |                                                             | Red                    |
|                  | 175°F / 79°C          |   | 150°F / 65°C                                                | Yellow                 |
|                  | 200°F / 93°C          |   |                                                             | Green                  |
|                  | 286°F / 141°C         | - | 225°F / 107°C                                               | Blue                   |
|                  |                       |   |                                                             |                        |
| BL 5603          | 135°F / 57°C          |   | 100°F / 38°C                                                | Orange                 |
|                  | 155°F / 68°C          |   |                                                             | Red                    |
|                  | 175°F / 79°C          |   | 150°F / 65°C                                                | Yellow                 |
|                  | 200°F / 93°C          |   |                                                             | Green                  |
|                  |                       |   |                                                             |                        |
|                  |                       |   |                                                             |                        |
| BL 5604          | 135°F / 57°C          | - | 100°F / 38°C                                                | Orange                 |
|                  | 155°F / 68°C          |   |                                                             | Red                    |
|                  | 175°F / 79°C          |   | 150°F / 65°C                                                | Yellow                 |
|                  | 200°F / 93°C          |   |                                                             | Green                  |
|                  |                       |   |                                                             |                        |
|                  |                       |   |                                                             |                        |

## Material Specifications :

| Frame       | Brass                                               |
|-------------|-----------------------------------------------------|
| Deflector   | Brass                                               |
| Cap         | Copper                                              |
| Load Screw  | Brass                                               |
| Bulb        | Glass                                               |
| Spring Seal | SUS                                                 |
| Finishes    | Natural Brass / Chrome<br>Plated / Polyester Coated |

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Model : BL 5601 / BL 5602 / BL 5603 / BL 5604

## Installation Requirements :

All Sprinklers shall be installed in accordance with NFPA 13 and all applicable local codes, regulations and standards. Any deviation from these requirements, including unauthorised modification of the sprinkler, will invalidate all warranties provided by Blazetech Systems Ltd.

The sprinkler system pipework shall be correctly sized to ensure the required flow rate is delivered to each sprinkler. Before installation, verify that the correct sprinkler model, style, orifice size and temperature rating have been selected for the application. Sprinklers should only be installed after the pipework has been completed to minimise the risk of mechanical damage. Any sprinkler found to be damaged must be replaced immediately.

Wet pipe systems must be adequately protected against freezing conditions. Following installation, the complete system shall be tested in accordance with the relevant recognised standards. If leakage occurs at the threaded connection, remove the sprinkler, apply a suitable pipe joint compound or PTFE thread seal tape, and reinstall the sprinkler correctly.

## Installation Instructions :

1. Install the sprinkler in the correct orientation:
  - **Upright Installation:** Install in the upright position. Position the deflector within 300 mm (12 inches) of the ceiling.
  - **Pendent Installation:** Install in the pendent position. Ensure it hangs vertically downward.
2. Apply only a non-hardening pipe joint compound or PTFE thread seal tape to the male threads of the sprinkler. Do not apply sealant to the female threads.
3. Hand-tighten the sprinkler into the fitting to ensure correct thread engagement.
4. Using the designated Sprinkler Wrench, tighten the sprinkler to form a leak-tight joint.
  - Recommended tightening torque: 7-14 ft-lb (9.5-19.0 N.m).
  - Do not exceed 21 ft-lb (28.6 N.m), as excessive torque may deform the spring seal, resulting in permanent damage or leakage.
5. For exposed pipework installations, ensure the sprinkler frame arms are aligned parallel to the branch pipe to achieve the correct installation orientation.

### For Recessed Pendent Sprinkler

- Align the escutcheon with the sprinkler threads and push or thread it over the sprinkler body until the outer edge of the escutcheon plate is flush with the mounting surface.
- Use the designated Sprinkler Key to complete the installation, following the same tightening torque requirements specified in Step 4.

## Warning

- All Sprinklers must be installed and maintained strictly in accordance with the instructions provided in this datasheet.
- Before installing, removing or adjusting any sprinkler, ensure that the piping system is fully depressurised and drained. Failure to follow this precaution may impair sprinkler performance and compromise the integrity of the fire protection system.
- It is the responsibility of the building owner or system operator to ensure that the fire protection system and all associated components are properly inspected, maintained and kept in reliable operating condition at all times.

## Caution

- Do not over-tighten or under-tighten the sprinkler to compensate for misaligned or incorrectly fitted escutcheon plates, as this may damage the sprinkler or impair its performance.
- Protective clips are fitted to safeguard the glass bulb during transportation and installation. These clips must remain in place until installation is complete to prevent accidental damage to the sprinkler.

## Maintenance :

Sprinklers must never be modified after manufacture. Any alteration, including painting, plating, coating or other surface treatments, may impair sprinkler performance and could prevent correct operation in the event of a fire.

Any sprinkler exposed to corrosive conditions should be replaced if it cannot be thoroughly cleaned. A visual inspection is recommended immediately after installation, with a detailed inspection carried out at least once every year thereafter.

The inspection, testing and maintenance of the fire protection system are the responsibility of the building owner or system operator. Automatic sprinkler systems should be maintained in accordance with all applicable local and national codes, standards and regulations.

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## Wrench & Key Description :

The Sprinkler Wrench and Key are specially designed installation tools for use exclusively with Sprinklers. Engineered to provide the correct grip and leverage, they ensure safe and accurate installation while reducing the risk of slippage or damage to the sprinkler. The use of non-approved installation tools is not recommended, as it may damage the sprinkler components and affect system performance.



Wrench

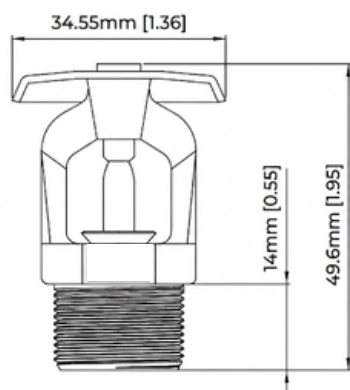


Key

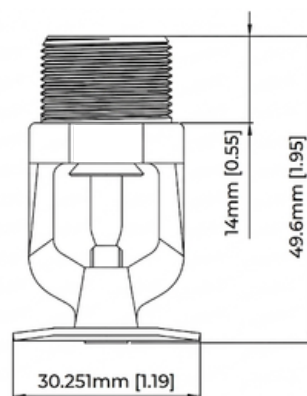
## Operation :

The Sprinkler operates using a frangible glass bulb filled with a heat-sensitive liquid. Under normal conditions, the bulb retains the sealing assembly in place. When exposed to fire, the surrounding temperature rises, causing the liquid inside the bulb to expand. Once the sprinkler's rated operating temperature is reached, the glass bulb shatters, releasing the sealing assembly and allowing water to flow through the sprinkler. The water is then discharged against the precision-engineered deflector, producing a controlled spray pattern designed to distribute water effectively for fire control and suppression.

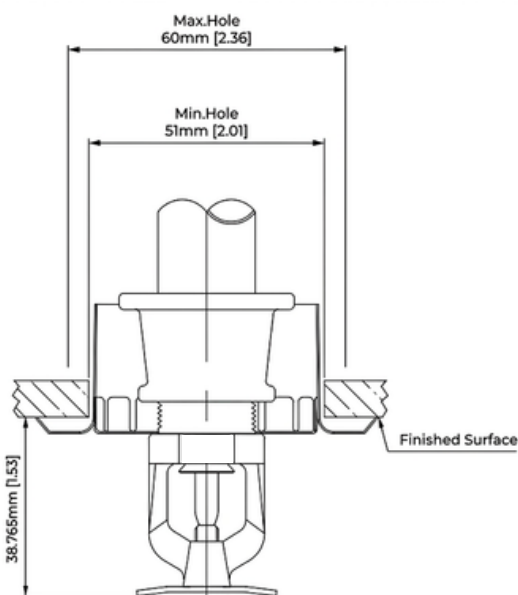
## Dimensions:



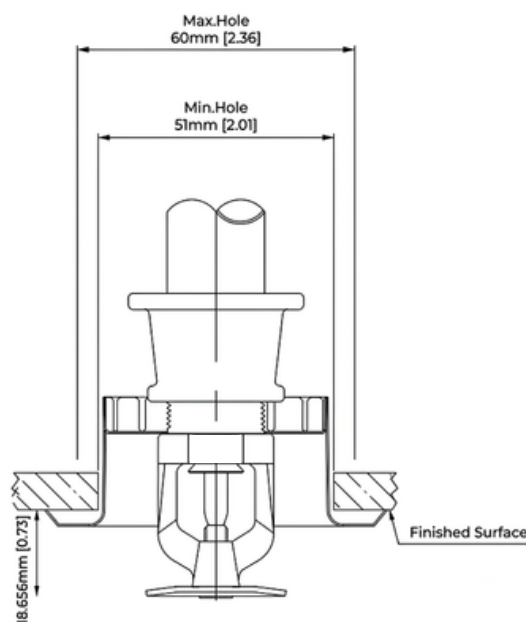
Upright Sprinkler



Pendent Sprinkler



Maximum Extension



Maximum Recess

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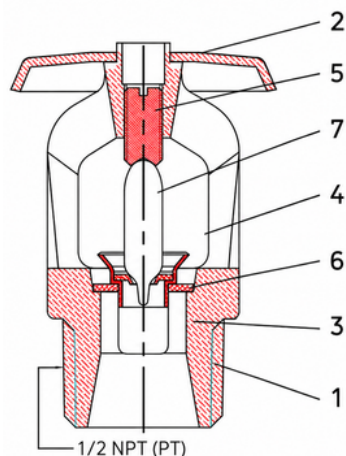


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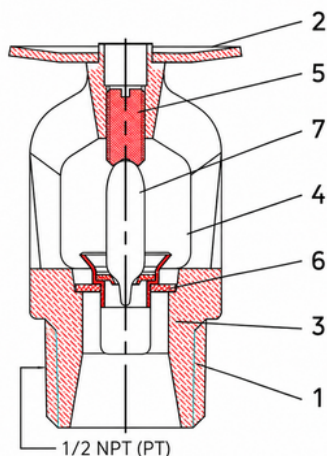


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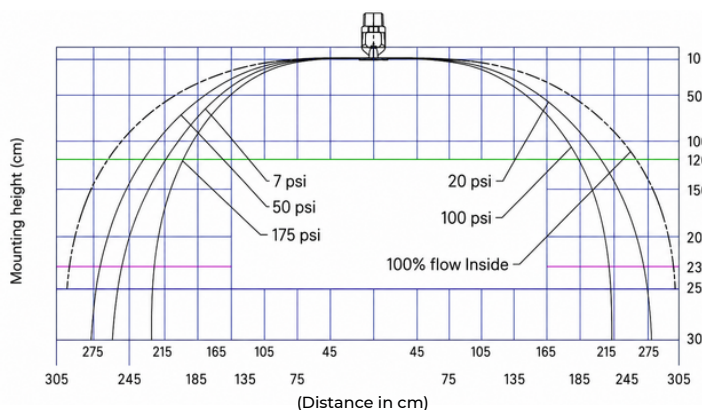
**BL 5601 & BL 5603**  
(Standard Response)



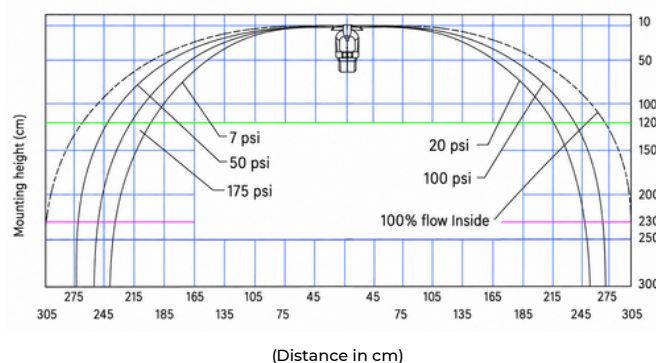
**BL 5602 & BL 5604**  
(Quick Response)

| Part No. | Name       |
|----------|------------|
| 1        | Frame      |
| 2        | Deflector  |
| 3        | Cap        |
| 4        | Cap Seat   |
| 5        | Load Screw |
| 6        | Seal       |
| 7        | Bulb       |

## Design Coverage :



**Distribution Pattern (Pendent)**



**Distribution Pattern (Upright)**

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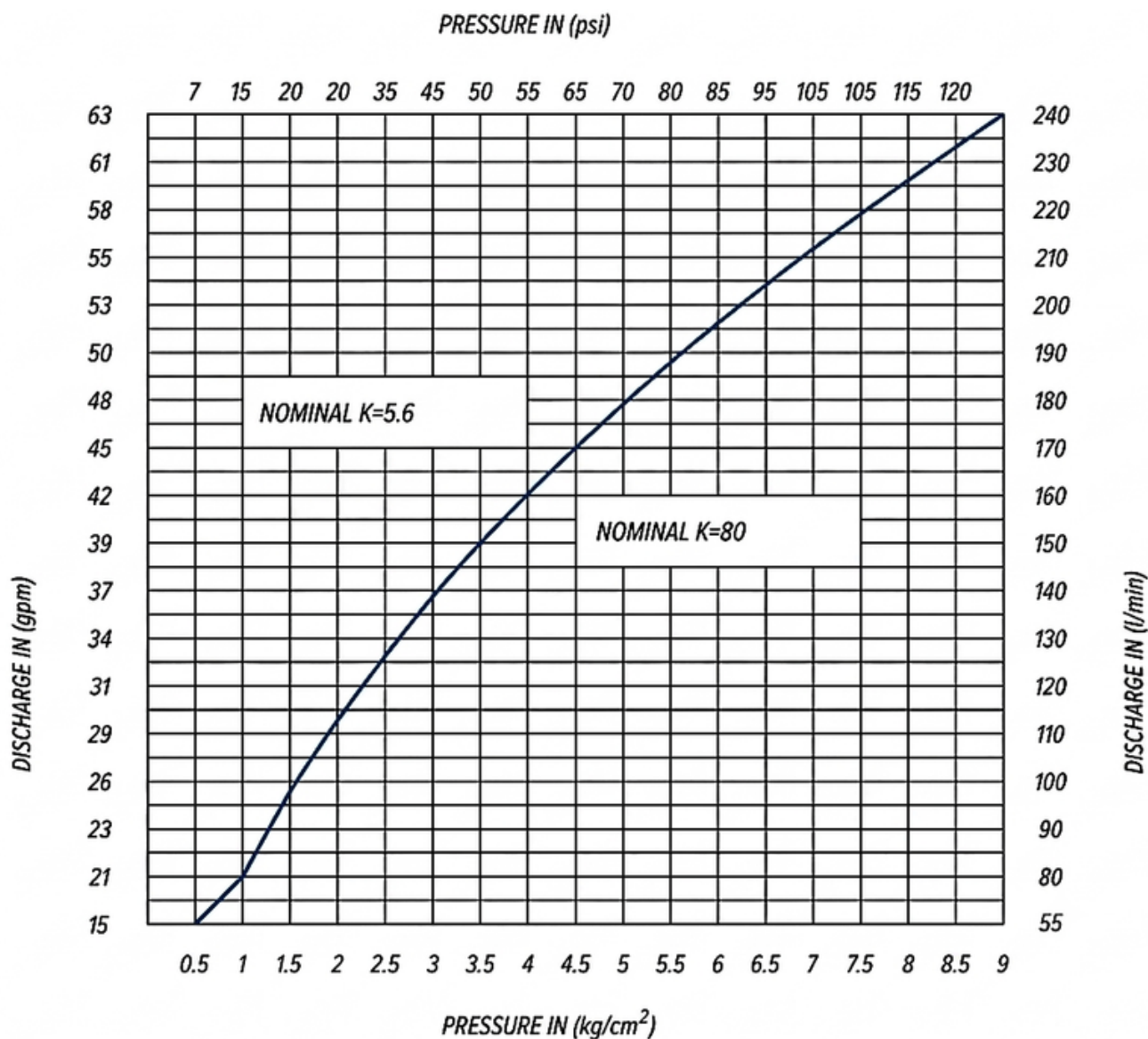
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## Pendent / Upright Sprinklers, K5.6(80)

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### Flow Characteristics :



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