

[INCH-POUND]
A-A-2745A
April 1, 1994
SUPERSEDING
A-A-002745
November 20, 1991

COMMERCIAL ITEM DESCRIPTION

SPRINKLER, LAWN

The General Services Administration has authorized the use of this commercial item description in preference to Federal Specification WW-S-610.

1. SCOPE

1.1 Scope. This commercial item description covers water activated surface connected sprinklers for watering, soaking, or sprinkling lawns and gardens.

2. CLASSIFICATION

2.1 Classification. The sprinklers shall be of the following types as specified (see 7.3).

- Type I - Impulse Head
- Type II - Multiple T Head
- Type III - Rotary Head
- Type IV - Oscillating Head

3. SALIENT CHARACTERISTICS

3.1 Standard commercial product. The sprinkler shall, as a minimum, be in accordance with the requirements of this commercial item description (cid) and shall be the manufacturer's standard commercial product. A standard commercial product is a product which has been sold or is currently offered for sale on the commercial market through advertisements, manufacturer's catalogs, or brochures, and represents the latest production model.

3.2 Hose Connection. Unless otherwise specified, all sprinklers offered in accordance with this commercial item description shall be equipped with 3/4 inch hose connections (3/4 inch NH, 11-1/2 threads per inch).

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: General Services Administration, Engineering Group (7FXEE), 819 Taylor St., Fort Worth, TX 76102.

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3.3 Base Material. When a metal base is specified the metal shall be corrosion resistant, such as aluminum, brass, bronze, zinc, nickel-copper alloy, stainless steel or zinc or other protective coating on steel. When a plastic base is specified the material shall be acrylonitrile butadiene styrene (ABS), polystyrene, nylon, acrylic, polypropylene or acetyl.

3.4 Base Design. The base shall be constructed to provide a rigid, stable platform for the sprinkler head. The design shall be in accordance with paragraph 3.4.1 or 3.4.2 as specified.

3.4.1 Sled Base. The sled base shall be an "H" configuration with the sprinkler head located between the sled runners at the center of the sprinkler. The base shall be a flow-through design equipped with male and female hose connections to allow the sprinkler to be operated in series. A cap and gasket shall be provided to cap the male connection. The sled base shall be of sufficient length and width to provide a stable platform for the sprinkler head during operation. Additionally, the base shall be designed to allow the sprinkler to be pulled by the hose across level turf when in operation without upsetting.

3.4.2 Ring Base. The ring base shall be a circle, square or rectangular with rounded corners. The outer edge shall be molded plastic or die-cast metal to provide a rail, minimum width 5/8 inch (15.9 mm), to add strength and rigidity to the base. The base shall be a flow through design equipped with male and female hose connections to allow the sprinkler to be operated in series. A cap and gasket shall be provided to cap the male connection. The ring base shall of sufficient length and width to provide a stable platform for the sprinkler head during operation.

3.5 Type I. Impulse Head. The Type I sprinkler shall be furnished with a removable, metal impulse head. The impulse head shall be adjustable to throw water in a full or partial circular pattern. The head shall be equipped with an adjustable break-up device to regulate the radius of coverage. The break-up device shall be spring loaded to maintain its setting and shall be designed to be adjusted by hand, without tools. The base shall be metal or plastic in accordance with paragraph 3.3. The base configuration shall be in accordance with paragraph 3.4.1 or 3.4.2 at the option of the manufacturer.

3.6 Type II. MultiRle T Head. The type II sprinkler shall be designed to spray water in a round or square pattern at the option of the manufacturer. The sprinkler shall have two metal arms with a spray nozzle at the end of each arm. The spray nozzles shall be adjustable from a fine mist to a full spray. The base may be a sled design in accordance with paragraph 3.4.1 or wheeled design made from plastic or metal in accordance with paragraph 3.3. Bases for Type II only may be provided in flow through or non-flow through configuration. The base shall be provided with a one piece strainer washer. The base shall be of sufficient length and width to provide a stable platform for the sprinkler head during operation.

The base shall be designed to allow the sprinkler to be pulled by the hose across level turf when in operation without upsetting.

3.7 Type III Rotary Head. The type III sprinkler shall be designed to spray water in a whirling action in a round or square pattern at the option of the manufacturer. The sprinkler head assembly shall have two or three arms made from corrosion resistant metal or plastic with non-adjustable spray tips. The sprinkler base shall be in accordance with paragraph 3.4.1. or 3.4.2. at the option of the manufacturer.

3.8 Type IV Oscillating Head. The type IV sprinkler shall be designed to spray water in a backward and forward motion over a rectangular pattern. The sprinkler shall be equipped with a control knob for adjusting the spray from a full sweep pattern to a partial left or partial right pattern. The spray bar shall be constructed from corrosion resistant metal and shall have not less than 15 brass jets for directing the spray. The base shall be a rectangular sled design with two runners, constructed from corrosion resistant metal or molded reinforced plastic, extending from the water inlet housing to the opposite end of the base supporting the spray bar. The sprinkler shall be not less than 14 inches (355.6 mm) in length and 5-1/2 inches (139.7 mm) in width overall. The width shall be measured within 2 inches of either end of the sprinkler. A combination washer and strainer shall be provided at the water inlet.

3.9 Performance.

3.9.1 Type I Impulse Head. The sprinkler shall be capable of providing a uniform distribution of water in a partial to full circular pattern. When operated in a full circle, the sprinkler shall be capable of distributing water 85 to 95 feet (25.9 to 29.0 m) in diameter at a water pressure of 45 to 55 psi (310 to 379 kPa) at the sprinkler for a period of 10 minutes.

3.9.2 Type II Multiple T Head. The sprinkler shall be capable of providing a uniform distribution of water in a circular pattern 15 to 25 feet (4.6 to 7.6 m) in diameter or a square pattern 15 to 25 feet in length and width (4.6 to 7.6 m) at a water pressure of 18 to 22 psi (124 to 152 kPa) at the sprinkler for a period of 10 minutes.

3.9.3 Type III Rotary Head. The sprinkler shall be capable of providing a uniform distribution of water over an area 35 to 45 feet (10.7 to 13.7 m) square or over a circular area 35 to 45 feet (10.7 to 13.7 m) in diameter at a water pressure of 35 to 45 psi (241 to 310 kPa) at the sprinkler for period of 10 minutes.

3.9.4 Type IV Oscillating Head. The sprinkler shall be capable of providing uniform distribution of water over a rectangular area of 2400 square feet (223 sq. m) or greater at a water pressure of 35 to 45 psi (241 to 310 kPa) at the sprinkler for a period of 10 minutes.

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3.10 Identification Marking. The sprinkler shall be marked in a permanent manner with the manufacturer's name or trade mark of such known character that the source of manufacture may be readily determined. The use of an adhesive-backed label shall be acceptable.

3.11 Workmanship. The sprinklers shall be free from sharp edges, projections, and defects which might impair its performance or appearance. Surfaces shall be free from flaws, and cracked or peeling plating or paint. Water inlets and caps shall not leak. No defect that affects appearance or serviceability shall be permitted.

3.12 Measurement system. The values stated in inch-pound units are to be regarded as the standard. The values stated in parentheses are for informational purposes only.

3.13 Metric Products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, providing they fall within tolerances specified using conversion tables contained in the latest revision of FED-STD-376, and all other requirements of this document are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should be made to the specification preparing activity for changes to this document.

4. REGULATORY REQUIREMENTS

4.1 Recovered materials. The offerer/contractor is encouraged to use recovered materials in accordance with Public Law 94-580, as amended, to the maximum extent practicable.

5. QUALITY ASSURANCE PROVISIONS

5.1 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this Commercial Item Description, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The government reserves the right to require proof of such conformance prior to the first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

6. PACKAGING

6.1 Preservation, packing, and marking. The preservation, packing, and marking shall be as specified in the contract or order.

