Pressure-Compensating Precision™ Series Spray Nozzles

with H2O Chip Technology

1”/hr. Matched Precipitation

Bidding Specification

The 570Z or equivalent spray head shall be equipped with a Pressure-Compensating PrecisionTM Series Spray Nozzle. The nozzle shall be capable of delivering \_\_\_\_\_\_\_\_ GPM to a radius of \_\_\_\_\_\_\_\_\_\_\_ feet at an operating pressure of \_\_\_\_\_\_\_\_ PSI. All Pressure-Compensating PrecisionTM Series Spray Nozzles shall have a precipitation rate of 1”/hr. Any Pressure-Compensating PrecisionTM Series Spray Nozzle shall be interchangeable to any other member of the nozzle family across all arcs and radii.

The Pressure-Compensating PrecisionTM Series Spray Nozzles of any given radius shall be comprised of a selection for 90°, 120°, 180°, 240°, 270°, and 360° arcs. In addition, side and corner strips shall be available with 6 different models. Appropriate arcs shall be installed per the Irrigation Plan of this Project Specification.

The nozzle shall utilize an internal oscillating chamber (chip) to accomplish water distribution from the spray head. These chips shall be mounted in sequence around the circumference of the nozzle turret to deliver greater arcs than the standard 90° or 60° arcs.

The nozzles shall be constructed of a non-corrosive, impact-resistant, UV-resistant, heavy duty plastic material (PBT). The attached screen shall be molded of high density polypropylene. The chip material shall be PBT.

The screen mesh shall be constructed such that any material moving through the screen will be smaller than the smallest orifice of any Pressure-Compensating Precision™ Series nozzle, preventing any nozzle plugging from external or internal debris. Sprinklers shall be mounted at grade and check valves shall be used on slopes to prevent low head drainage.

The Pressure-Compensating Device disc shall be made of thermoplastic elastomer (TPE), and color coded for the various flows. The Pressure-Compensating Device disc shall allow the Pressure-Compensating Precision Series Spray Nozzles to maintain 1”/hr. match precipitation from 50 PSI to 70 PSI.

The nozzles shall have a stainless steel radius reduction screw. This screw shall allow reduction of radius of up to 25% of the original designated radius without affecting the precipitation rate.

The nozzles shall be color coded and stamped as follows:

• Color coding on top shall indicate radius—red for 5’, green for 8’, blue for 10’, brown for 12’, and black for 15’

• Arc shall be designated by a white stamping of top of the nozzle showing the pattern

• The model number shall be designated by a white stamping on the top of the nozzle. All model numbers shall begin with O followed by the radius and the arc.

• The Toro logo on top of the nozzle shall be in red colored stamping, to distinguish the Pressure-Compensating Precision™ Series Spray Nozzles from the standard Precision™ Series Spray Nozzles, which have the Toro logo in white.

The Pressure-Compensating Precision™ Series Spray Nozzles, when properly spaced and maintained, shall deliver irrigation efficiency where SC values are ≤ 1.5 and CU values are ≥ 75.

Nozzle models O-X-XP (where “X” represents the variable characters) shall be able to be installed in popup bodies having a 5/8-27 UNS male threaded stem, at all common popup heights. Sprinkler Assembly shall also be able to be attached to a 1/2 FIPT x 5/8-27 UNS male threaded adapter for use on fixed pipe risers. Models O-T-XXP (where “X” represents the variable characters) shall be able to be installed in popup spray head bodies having a 5/8-28 UNS female threaded stem, at all common popup heights. Sprinkler Assembly shall also be able to be attached to a 1/2 FIPT x 5/8-28 UNS female threaded adapter for use on fixed pipe risers.

The sprinkler shall be sold by the Toro Company, Irrigation Division, Riverside, California.