

MISCELLANEOUS SPECIALTY ITEMS – SPRAY SYSTEMS

1. GENERAL

1.1 Work Included

- .1 Supply, installation and testing of process specialty items.

1.2 Submissions

- .1 Shop Drawings: Submit in accordance with Section 01300 and Section 11005.

2. PRODUCTS

2.1 General

- .1 Provide new, unused equipment for installation.
- .2 All materials shall be free from defects or flaws and meet manufacturer's standard.
- .3 All materials and equipment shall meet or exceed the intended function and design standard as described below.

2.2 Product Descriptions

- .1 Spray Nozzles
 - .1 Each spray line shall include a flexible connection, an isolation ball valve, and a drain valve on each 25 mm spray bar line. Provide threaded fittings. Slope the spray line and nozzle downward to allow the pipe and nozzles to drain free of water when not in use.
 - .2 The spray nozzles are to be installed at 500 mm centres on a 25 mm diameter spray bar, unless otherwise shown on the drawings. The spray bar should be located approximately 600 mm above the normal liquid level.
 - .3 Spray nozzles shall have an integral cap and non-removable vane. The nozzle shall be of the quick-connect quarter-turn type. The nozzle and body shall be made of stainless steel. The spray shall be square. The nozzle inlet connection shall be 12 NPT, nominal orifice of 5.5 mm, capacity of 0.12 L/s at 300 kPa. The spray angle shall be 80 degrees. Design standard: John Brooks (Spraying Systems Co) FullJet Square spray nozzle, one-quarter QJJA body, QHA18SQ tip. Materials are stainless steel.

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- .2 Fermenter Tank Sprinklers
 - .1 Acceptable manufacturers
 - .1 Hunter
 - .2 Rainbird
 - .2 Trajectory is 15 degrees. Spray angle is 120 degrees. Provide eight (8) sprinklers per fermenter tank. Metal materials to be stainless steel as service condition is corrosive. Sprinklers to be designed for 300 kPa water and air pressure.
 - .3 Sprinkler orientation is downward, so that trajectory is 15 degrees down from the horizontal.
 - .4 Install sprinklers at accessible location under the inspection hatch in the cover.
 - .5 Maximum flowrate per sprinkler head: 3.78 L/min (1 usgpm)
 - .6 Spray radius: 8 m

3. EXECUTION

- .1 Not Used

END OF SECTION