



PRODUCT SPECIFICATION SHEET

HCSM-N SMART Manifold

General Description

The HCSM-N is a family of nitrogen distribution manifolds engineered and designed to automatically purge residual air from multiple gas pressurized sprinkler systems when nitrogen gas is used as the pressurizing medium. Made for wall or support frame mounting, they can serve multiple risers located in close proximity within a single riser room. The “N” refers to the number of zones that can be served by a single manifold and this can range from 2 to 10. Note that the vent for each element is located within the manifold assembly and not on the sprinkler system piping.

99% pure nitrogen (1% oxygen) is supplied to the manifold from a Holtec nitrogen generator. The nitrogen then feeds out and into the individual zone firewater valves using Holtec’s patented cyclical fill and vent process, analogous to breathing. The process is individually controlled to each zone by a PLC linked to solenoid valves and operates until the pre-set number of cycles has been completed independently for each zone. This process can take 15 to 30 days (each zone may be different) depending on a number of factors. A single 120V, 15 amp circuit is required to power the solenoid valves and the control PLC. Each element of the manifold includes an air maintenance device (Victaulic model 757) and a custom-sized restriction orifice to precisely control the rate of gas being vented.

Other Key Features:

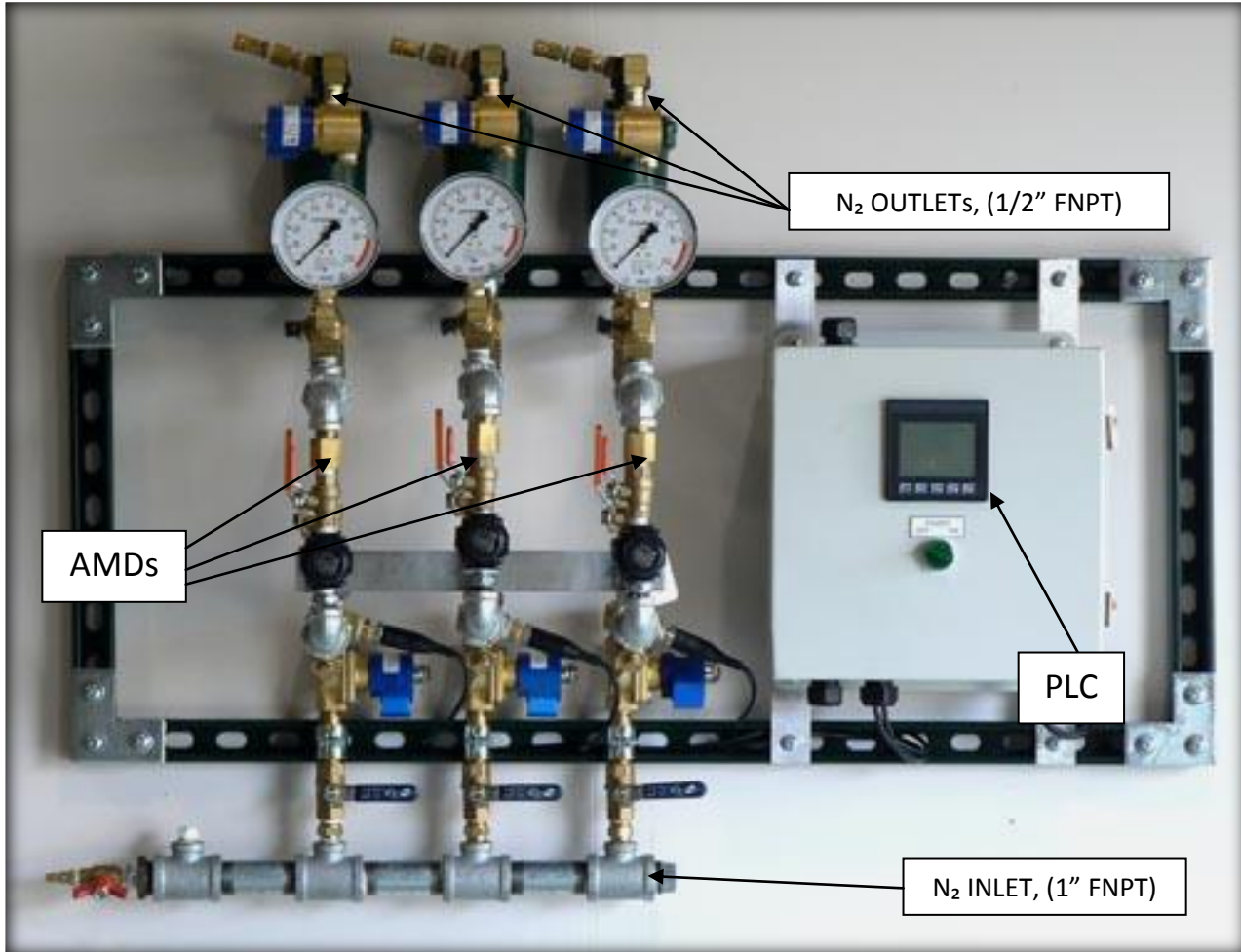
- The pressurizing phase of each “breathing cycle” ceases during the venting phase thus maximizing the efficient use of nitrogen gas.
- The PLC screen indicates the pressure and status of each zone including an indication of excessive leakage from the zone (once the vent cycling process has been completed).
- Each vent flow control orifice is protected by a separate filter.
- Power failure at the manifold causes the feed solenoid valves to open and the vent solenoids to close ensuring continuous nitrogen supply.
- A quick-fit connection port is included on each zone for sampling the gas concentration using a portable analyzer.

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3-ZONE TYPICAL ARRANGEMENT

Specifications:

- Dimensions & Weights (2-4 zones): 43" L X 19" W X 33" H 85 – 115 lbs
- (5-8 Zones): 68" L X 19" W X 33" H 135 – 180 lbs
- (9-10 Zones): 79" L X 19" W X 33" H 195 – 215 lbs
- Power Requirements (all options): One 120V 15A circuit
- Inlet Air Connection: 1" FNPT
- Outlet N₂ Connections: ½" FNPT

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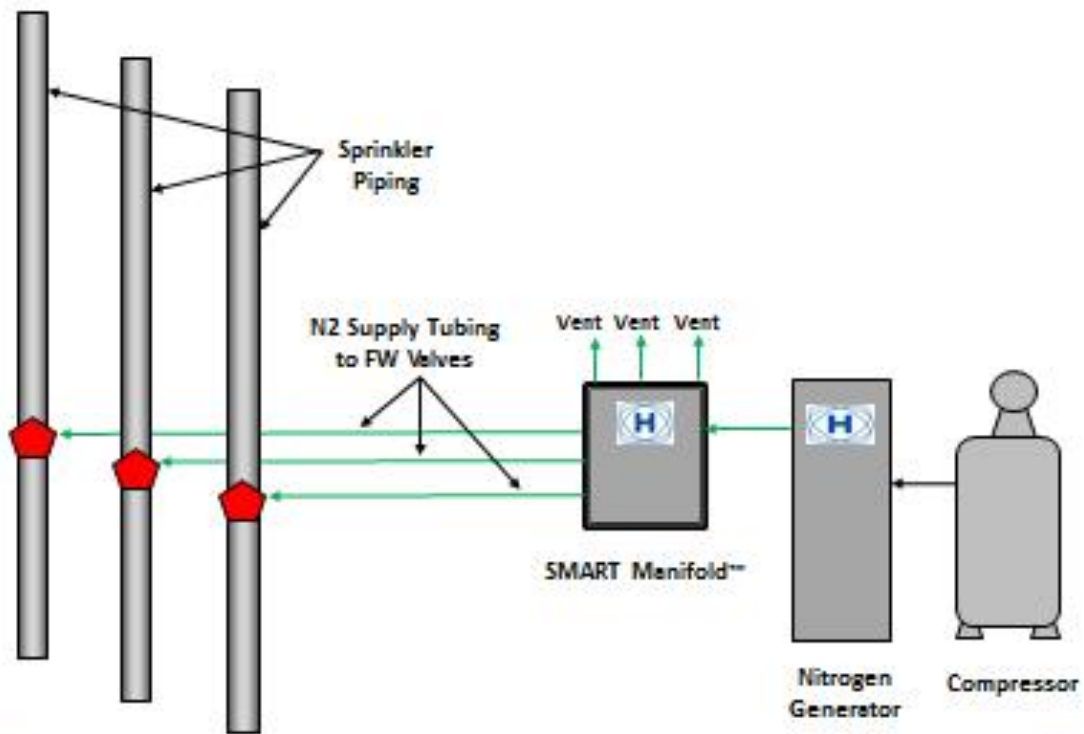
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Typical Installation Diagram

Multiple Zones supplied by *HCSM-N*, SMART Manifold™
Holtec's "High Tech." Option



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