ELECTRONIC SSD-PLUS DRAINS Level Sensing

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FIRST EDITION

Davidson, NC 28036

GENERAL DESCRIPTION / MODEL SELECTION

The System Saver Drain - Plus is a high capacity valve designed to reliably drain condensate from a compressed air system without venting compressed air. The valve is designed to withstand fouling due to rust, scale and other particulate matter. SSD -Plus valves work on the principle of detecting a pre-determined level of con-densate , within a collection bowl, and discharging it, without losing compressed air. The detection and dis-charge cycle is fully automatic and requires no user inter-vention. Particularly suited for use with compressor inter-coolers, after-coolers, air receivers and refrigerant dryers.

SSD7-Plus and SSD14-Plus
Liquid condensate enters the drain bowl via the upper or lower inlet port while the outlet valve is closed. The sensor is constantly monitoring for presence of liquid. The condensate reaches a predetermined point and the sensor is activated. The outlet valve is opened for a pre-set time. Condensate is discharged, via the outlet port using system pressure. The volume discharged is directly proportional to this pressure.

The outlet valve is closed after a pre-set time. The pre-set time has been calculated to allow a small amount of liquid to remain in bowl, preventing unnecessary air loss. This volume is calculated on the maximum operating pressure of the drain, and the lowest viscosity liquid to be drained, i.e. water. All SSD-Plus models operate on exactly the same principle. Only the discharge timings differ for each model, to compensate for the differing bowl volumes.

SSD21-Plus, SSD28-Plus and SSD35-Plus
Drains are designed for higher condensate volumes. Drain bowl is at full system pressure and the solenoid valve is closed. Liquid condensate enters the drain bowl via the upper or lower inlet ports while the outlet valve is closed. A level sensor located within the drain bowl constantly monitors the liquid level. When the condensate reaches a predetermined point, the solenoid valve is activated and is opened for a set time period. Liquid is discharged from the drain bowl.

Under pressure, through the outlet port. The pre-set opening time has been selected to allow a small amount of condensate to remain in the bowl after the solenoid has closed. This eliminates any unnecessary loss of costly compressed air. Level monitoring and discharge operation are continuous.

PERFORMANCE

MODEL	MAXIMUM OPERATING PRESSURE PSIG/BARG	Electrical Requirements	INPUT POWER (kW)	COMPRESSOR CAPACITY*	REFRIGERATION DRYER
				SCFM / m³/min	SCFM / m³/min
SSD7-Plus	232 / 16	110-1-60/50 230-1-60/50		175 / 5.0	303 / 8.6
SSD14-Plus	174 / 12	110-1-60/50 230-1-60/50		349 / 9.9	607 / 17.2
SSD21-Plus	232 / 16	110-1-60/50 230-1-60/50		708 / 20.0	1230 / 34.8
SSD28-Plus	232 / 16	110-1-60/50 230-1-60/50		3399 / 96.3	5904 / 167.2
SSD35-Plus	232 / 16	110-1-60/50 230-1-60/50		33517 / 949.1	58223 / 1649

* Rating conditions are at extreme conditions at 95°F inlet temperature, 100 psig inlet pressure, 85% relative humidity, 95∞F ambient temperature, compressor discharge temperature 130°F, refrigeration dryer dewpoint 35(F and based on 12 hrs/ day.