

Pneumatic No Air Loss Drain

PNLD 16 Operation

Condensate, from an air receiver, dryer, drip leg or any other low spot in the compressed air system of not more than 200 PSIG is directed to either the upper inlet (A), or lower inlet (B) of the drain reservoir. A pressure differential line must be run from the top center port of the drain to a point immediately downstream of the point of drainage. This avoids a buildup of head pressure as the drain fills and allows for smooth flow of condensate into and out of the drain. The lowest point of the vessel being drained must be no lower than the upper condensate inlet (A) of the drain.

As the condensate level rises in the reservoir of the drain, the internal float (C) rises. When the accumulated condensate reaches a quantity of 16 ounces, the position of the Float (C) raises. The opposite end of the lever upon which the float is mounted is correspondingly lowered as the float rises. This lowers the Viton plug (D) away from the pilot air nozzle, thus allowing compressed air from the upper headspace in the reservoir to flow through the actuating circuit (E), through the filter and into the actuator.

Under air pressure, the shaft of the actuator extends, opening the 3/8" discharge ball valve (F), allowing the condensate to exit.

As the condensate exits, the internal float (C) drops, following the level in the reservoir and blocking airflow from the reservoir to the actuating circuit (E). Thus, actuator airflow is stopped. A relief port (G) located at the top of the actuator assembly allows compressed air trapped behind the actuator's piston to escape. With no air pressure to maintain the actuator in the extended position, the spring (internal to the actuator) returns the shaft to its original position, closing the discharge ball valve (F). The drain is now prepared for the next cycle.