Differential Piston Main Valve
Stop-Check Feature

Data Sheet 1000SC.01B

Description

The main valve is an integral component of any GA Industries differential piston automatic control valve and is the actual on/off or regulating element. The pilot system controls whether the main valve is fully open, fully closed or positioned somewhere in between to regulate pressure, flow or level.

In certain applications, if inlet pressure should fall below outlet pressure reverse flow back through the valve would occur. When the main valve incorporates the "stop-check" feature, the integral check valve closes upon pressure reversal to prevent back flow, *independent of the pilot control system.*

The standard piston is a one piece component while "stop-check" piston has a separate "baffle plate." In normal operation the piston and baffle plate move up and down together, However, upon pressure reversal, the baffle plate separates from the piston and drops to the seat to prevent back flow.

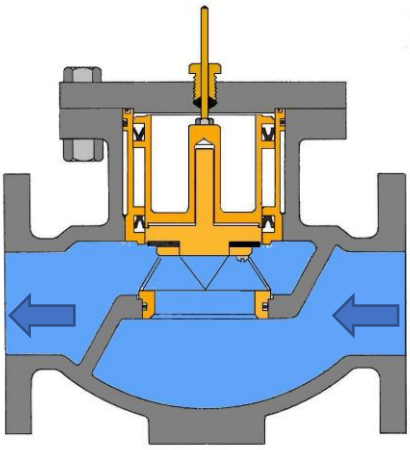
The "stop-check" feature can be included in any type of GA Industries differential piston control valve from 3" to 20" size. Figures 3400-D Single Acting Altitude Valve and Figures 4900-D or 4900-U Pressure Reducing Valves are standard with the "stop-check" feature. For any other differential piston control valve except double acting altitude valves (because reverse through that valve has to occur), the "stop-check" is optional and included by suffixing a "C" to the Figure Number (e.g., 4700-DC, 7300-DC, 3800-DC).

Standard Materials

- Piston Lead Free Bronze
- Baffle Plate Lead Free Bronze

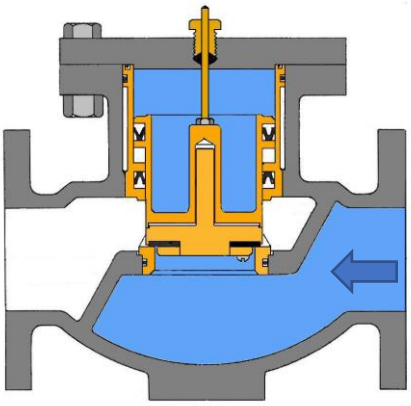
Normal Opening and Closing

Pressure on top of the piston is evacuated through pilot system, inlet pressure lifts piston and baffle to fully open valve.



VALVE OPEN

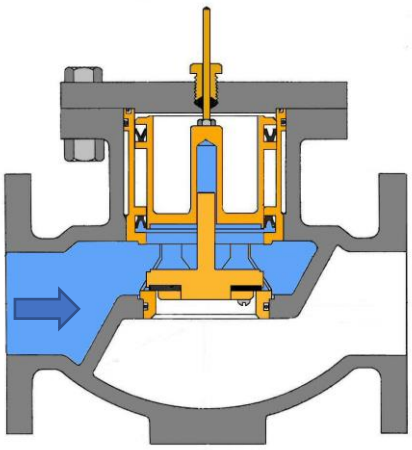
Inlet pressure is applied to the top of the piston through pilot system creating a closing force to push piston and baffle down until valve is fully closed.



VALVE CLOSED

Stop-Check Closing

The baffle will drop anytime a pressure reversal occurs when the valve is not fully closed in order to prevent back flow.



STOP CHECK CLOSED

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