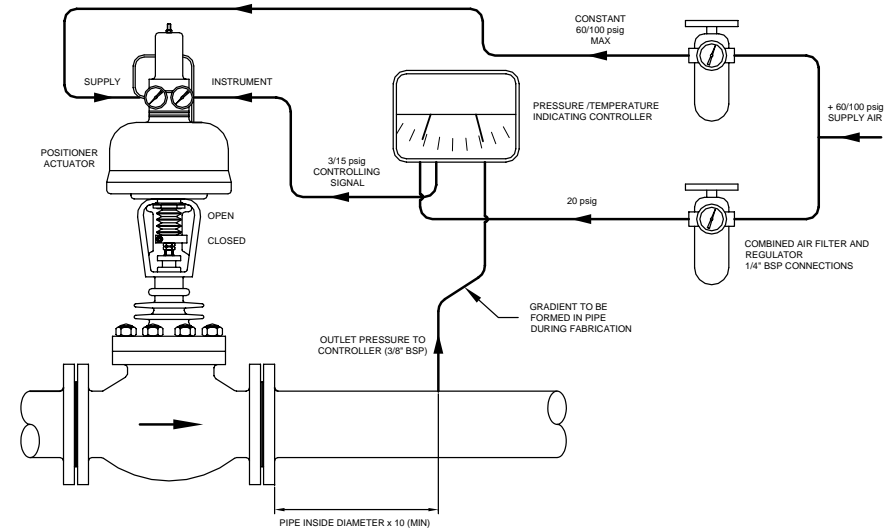


Installation

Air filter regulators are recommended as 90% of instrument faults can be traced to dirt. Supply and instrument connections are 1/4" BSP unless otherwise stated.



Operation

The diagram describes an A100 Control Valve with the valve in the reducing mode actuated and controlled by air. Alternative control loops and functions are available from Auld including sustaining and temperature control.

As the fluid passes through the valve and builds up the outlet pressure which in turns is fed to the pneumatic pressure controller which converts a steady air supply of 20 psig to a signal pressure varying between 3 – 15 psig. The controller continuously compares the actual outlet pressure against the set point, modifies the signal pressure in reverse proportion to the outlet pressure and feeds this to a double diaphragm housed in the positioner (21). As long as the positioner receives a constant signal pressure the supply pressure is prevented from stroking the valve.

As the valve outlet pressure starts to exceed the set point the signal pressure changes and unbalances the actuator piston causing the valve lid (3) position to change. When the set point is reached the controller will maintain this in the same way.

Before any work is carried out on the valve ensure that the valve is totally isolated from any pressure in the pipeline.

A100PG control valve – Safety warnings

- Before stripping the valve it should be totally isolated from any pressure in the pipeline, also ensure that the air pressure is relieved from the actuator.
- The A100PG is a high capacity valve and therefore downstream pipework should be protected by an adequately sized safety valve to prevent damage due to overpressure.
- The valve may be heavy so care should be exercised when lifting the valve – check mass of valve before any attempts to lift it are made.
- Valve inlet and outlet ports are blanked off when leaving the factory – these coverings should be left in place until valve is ready to be fitted to the pipeline.
- External pipes fitted to the valve are not handling points and valves should be lifted using safe slinging practice with slings fitted around the flange necks.
- The valve may get hot during operation and therefore care should be exercised if working in the immediate vicinity.
- Process fluid may leak from the gland area if it is needing tightened, therefore care should be exercised when adjusting the gland nuts.