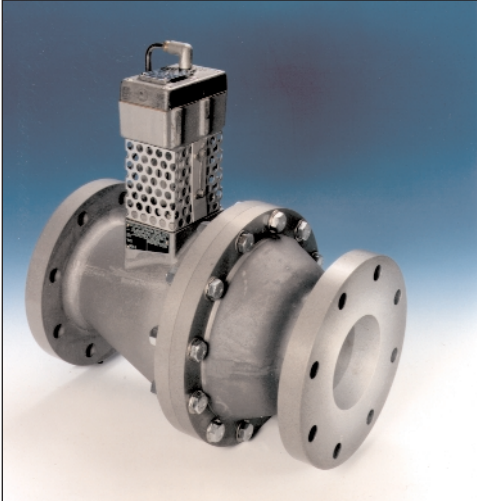


FUEL GRADE MONITOR & CONTROL VALVE



- **Automatically isolates flow should incorrect fuel be delivered**
- **Simple, robust, self contained, no power required**
- **No maintenance and easy to install**
- **Sensitive to a 1% change in density**

Applications

When dealing with multiple fuel grades of white oils and/or multiple tanks, the possibility may exist of delivering the wrong fuel into the wrong tank or fuel of an incorrect density. The Alan Cobham Fuel Grade Monitor & Control Valve monitors the fuel on delivery and automatically shuts off the valve if the incorrect fuel density is detected. The valve is designed to detect and respond to changes of 1% in fuel density, thus preventing incorrect fuel or liquid delivery.

This dual feature of continuous monitoring and control makes it ideally suitable in eliminating errors in fuel delivery.

Typical applications :

- Airport fuel delivery to storage tanks
- Fuel delivery at fuel storage terminals
- Mixed product storage facilities

Principle

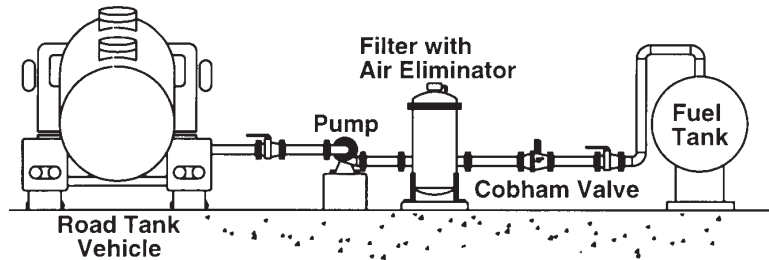
The fuel grade monitor is directly mounted to a servo control valve and consists of one or two floats, depending on the application, with their density corresponding to the upper or lower limits of the liquid flowing through it. The two floats are vertically mounted in glass tubes which are linked to the valve chamber in a bypass. The tubes can also be linked to an air eliminator chamber which allows any entrained air or gas to be removed.

Fuel must flow through the bypass monitor for the servo control valve to open. When fuel of the correct density is flowing through the monitor, the two floats remain in their rest positions and the valve remains open. If fuel of an incorrect density passes through, the corresponding float will rise (or fall) and close the by-pass flow, thereby causing the valve to close.

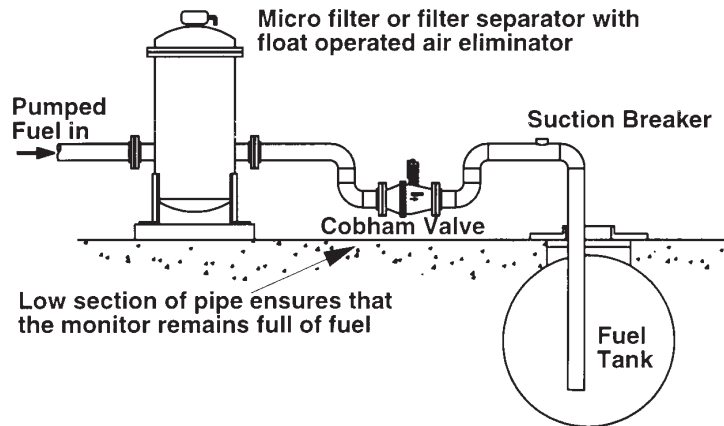
Once the monitor becomes saturated with this incorrect fuel the valve will remain closed and cannot be bypassed. The monitor can only be re-set by thorough cleaning, thus ensuring against fuel contamination.

Typical Installations

Above ground tank :



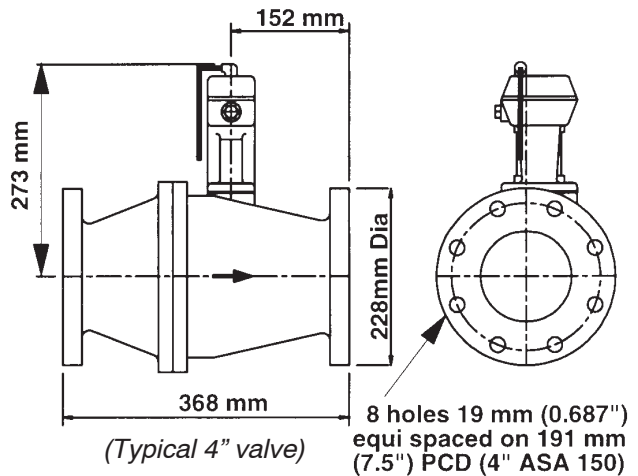
Underground tank :



Recommended Installation

The monitor valve is only suitable for pumped systems and is not recommended for gravity discharge systems.

The valve is installed horizontally in the pipeline, downstream of the filter or strainer. It is recommended that as the valve is sensitive to changes in fuel density any air should be removed by an air separator before it enters the valve. The valve should always remain full of fuel.



Specifications

Material	Anodised aluminium alloy
Maximum working pressure	10 bar
Maximum flow rate	2" - 600 litres/min 4" & 6" - 4,500 litres/min
Temperature	80°C
Flange size	2" - 150 mm OD with 4 x 5/8" YNF tapped holes on 114.3 mm PCD 4" - 229 mm OD with 8 x 19 mm holes on 191 mm PCD 6" - 279 mm OD with 8 x 22 mm holes on 260 mm PCD

Also available to meet specific customer requirements



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